

# Curriculum Vitae

George Tauchen

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## Contact Information

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## Personal

Birth date: November 26, 1949

## Education

PhD University of Minnesota 1978  
BA University of Wisconsin 1971

## Areas of Research

Econometrics  
Financial Economics

## Professional Experience / Employment History

### Duke University

William Henry Glasson Professor of Economics, Duke University, 1997–present  
Professor, Department of Economics, Duke University, 1987–present  
Associate Professor with tenure, Department of Economics,  
Duke University, 1983–1986  
Assistant Professor, Department of Economics, Duke University, 1977–1982  
Professor of Finance (Joint Appointment), Fuqua School of Business, 1998– present

### Visiting Positions

Visitor, University of Chicago, March–April 2016

Visitor, New York University, March–April, 2010–2015  
Visitor, University of Chicago, January 1995–March 1995  
Visiting Fellow, The Australian National University, April 1995–June 1995  
Visitor University of Chicago, January 1987–June 1987

## Awards, Honors, and Distinctions

Fellow of the Society for Financial Econometrics 2012  
Founding member of the Society for Financial Econometrics 2007  
Fellow of the Journal of Econometrics 2004  
Duke University Scholar/Teacher of the Year 2003  
William Henry Glasson Professor of Economics Duke University 1997  
Fellow of the Econometric Society 1994  
Fellow of the American Statistical Association 1993

## Lectures and Seminars

Many research presentations at major U.S. universities and international meetings, conferences, and research institutes  
Invited address at the Seventh World Congress of the Econometric Society in Tokyo, Japan  
Invited lectures in Buenos Aires, Hong Kong, Taipei, Helsinki, Sydney, Perth, Melbourne, Paris, Madrid, Vienna, Tokyo, Santiago de Chile, and London

## Professional Service

### Internal Departmental Service

- Review committees for various departmental internal promotions and external appointments 1990–2017
- Search committees for various positions in econometrics, 1990–2017
- Review Committee for Fuqua Dean December 2010–February 2011
- President's Advisory Committee on Investment Responsibility, Chair, July 1, 2006 - June 30, 2010
- Duke University Research Committee, Member, September 1, 2002 - June 30, 2006
- Provost's Advisory Committee on Appointments, Promotions, and Tenure, September 1, 2004 - June 30, 2005
- Provost's Advisory Committee on Appointments, Promotions, and Tenure, Chair (September 2001–June 2002), September 1999–June 2002
- Provost's Committee on Distinguished Professors, Member, Spring 1999
- Arts and Sciences Computing Committee, Chair
- Department of Economics, Director of Graduate Studies, 1990–1992, 1997–1998
- Duke in NY: Financial Markets and Institutions Program, June 1, 2008 - present
- Duke Center for Financial Economics, June 1, 2008 - present
- MA Program, Department of Economics, Coordinator, 1992–1994
- 1986 Summer Meeting of the Econometric Society, Local Arrangements Chairman, 1986

### Major External Service

- Program Chair, Tenth Annual Meeting of the Society for Financial Econometrics, New York 2017

- Program Chair, Program Chair, 2007 North American Meeting of the Econometric Society, 2007
- Business and Economics Section of the American Statistical Association, Chair, 1997-1998
- Program Committee, 1996 Summer Meeting of the Econometric Society, Member, 1996
- Program Committee, Twelfth World Congress of the Econometric Society, Member, 1995
- Program Committee, 1988 Winter Meetings of the Econometric Society, Member, 1988
- 1986 Summer Meeting of the Econometric Society, Local Arrangements Chairman, 1986

## Editorial Service

Journal of Financial Econometrics, Co-Editor, 2006–2017  
 Journal of Econometrics, Associate Editor, 2006 - 2008  
 Journal of Econometrics, Co-Editor, Special Issue: Frontiers of Financial ..., 2003  
 Journal of Dynamic Macroeconomics, Co-Editor, Special Issue, 1997  
 Journal of Business and Economic Statistics, Editor, 1992 - 1996  
 Journal of Empirical Finance, Associate Editor, 1991 - 1992  
 Econometric Theory, Associate Editor, 1989 - 1992  
 Econometrica, Associate Editor, 1986 - 1992  
 Journal of Business and Economic Statistics, Associate Editor, 1986 - 1989  
 Journal of the American Statistical Association, Associate Editor, 1984 - 1989  
 Referee Scholarly Journals, Approximately 7-10 per year, Referee, 1977–present  
 NSF Panel: Innovative Multidisciplinary Methods in Computing, Panelist, February, 2008,2009

## Conferences Organized

Co-Organizer, Duke/UNC Conference on Volatility and Financial Econometrics  
 September 2016  
 Co-Organizer, Conference on New Methods in Statistic and Financial Econometrics  
 Distributions, November 2013  
 Co-Chair, Nonlinear and Financial Econometrics Conference:  
 A Tribute to A. Ronald Gallant, 1 May 2011  
 Program Chair, 2007 North American Summer Meeting of the Econometric Society,  
 March 1, 2006 -December 31, 2007  
 Co-Organizer, Conference on the Risk Neutral and Objective Probability  
 Distributions, October 2000  
 Co-organizer, 1997 NSF-NBER Time Series Meeting, October 1997  
 Co-organizer, Conference on New Computational Methods in Economics and Finance,  
 September 1995  
 Co-organizer, CIRANO/CRDE International Conference on Stochastic Volatility,  
 October 1994  
 Co-organizer, Triangle Econometrics Conference, December 1993-1998  
 Organizer, Workshop on Nonlinear Dynamic Models, 1989  
 Co-organizer, Conference on Nonparametric and Semiparametric Methods in Statistic and  
 Econometrics, May 1988

## Book

Nonparametric and Semiparametric Methods in Econometrics and Statistics, in Proceedings of the Fifth International Symposium in Economic Theory and Econometrics, edited by George Tauchen with William A. Barnett and James Powell (1991), Cambridge University Press

## Articles

- [1] A. Ronald Gallant and George Tauchen. Exact bayesian moment based inference for the distribution of the small-time movements of an Ito semimartingale. **Journal of Econometrics (forthcoming)**, 2018.
- [2] Jia Li, Viktor Todorov, George Tauchen, and Huidi Lin. Rank tests at jump events. **Journal of Business and Economic Statistics (forthcoming)**, 2018.
- [3] Jia Li, Viktor Todorov, George Tauchen, and Huidi Lin. Jump factor models in large cross-sections. **Submitted**, 2018.
- [4] Jia Li, Viktor Todorov, and George Tauchen. Jump regressions. **Econometrica**, 85(1):173 – 195, 2017.
- [5] Jia Li, Viktor Todorov, and George Tauchen. Adaptive estimation of continuous-time regression models using high-frequency data. **Journal of Econometrics**, 200(1):36–47, 2017.
- [6] Jia Li, Viktor Todorov, and George Tauchen. Mixed-scale jump regressions. **Journal of Econometrics**, 201(2):417–432, 2017.
- [7] Jia Li, Viktor Todorov, and George Tauchen. Robust jump regressions. **Journal of the American Statistical Association**, 112(517):332 – 341, 2017.
- [8] Eric Ghysels and George Tauchen. Introduction: Reflections on the probability space induced by moment conditions with implications for bayesian inference. **Journal of Financial Econometrics**, 14(2):227 – 228, 2016.
- [9] Jia Li, Viktor Todorov, and George Tauchen. Inference theory for volatility functional dependencies. **Journal of Econometrics**, 193(1):17 – 34, 2016.
- [10] Jia Li, Viktor Todorov, and George Tauchen. Estimating the volatility occupation time via regularized laplace inversion. **Econometric Theory**, 32(5):1253 – 1288, 2016.
- [11] M. Reiss, V. Todorov, and G. Tauchen. Nonparametric Test for a Constant Beta between Ito Semimartingales based on High-Frequency Data. **Stochastic Processes and their Applications**, 125:2955–2988, 2015.
- [12] Robert Davies and George Tauchen. Data-driven jump detection thresholds for application in jump regressions. Technical report, Duke University, 2015. **Submitted**.

- [13] Torben G. Andersen, Oleg Bondarenko, Viktor Todorov, and George Tauchen. The fine structure of equity-index option dynamics. **Journal of Econometrics**, 187(2):532 – 546, 2015.
- [14] Viktor Todorov and George Tauchen. The empirical distribution function of scaled increments of ito semimartingales. **The Annals of Applied Probability**, 24:1850–1888, 2014.
- [15] Viktor Todorov, George Tauchen, and Iaryna Gryniv. Volatility activity: Specification and estimation. **Journal of Econometrics**, 178(1):180 – 193, 2014.
- [16] Jia Li, Viktor Todorov, and George Tauchen. Volatility occupation times. **Annals of Statistics**, 40:1865–1891, 2013.
- [17] Tim Bollerslev, Daniela Osterrieder, Natalia Sizova, and George Tauchen. Risk and return: Long-run relations, fractional cointegration, and return predictability. **Journal of Financial Economics**, 108(2):409–424, 2013.
- [18] Viktor Todorov and George Tauchen. The realized laplace transform of volatility. **Econometrica**, 80(3):1105–1127, 2012.
- [19] Viktor Todorov and George Tauchen. Inverse realized laplace transforms for non-parametric volatility density estimation in jump-diffusions. **Journal of the American Statistical Association**, 107(498):622–635, 2012.
- [20] Viktor Todorov and George Tauchen. Realized laplace transforms for pure-jump semimartingales. **Annals Of Statistics**, 40(2):233–1262, 2012.
- [21] Tim Bollerslev, Natalia Sizova, and George Tauchen. Volatility in equilibrium: Asymmetries and dynamic dependencies. **Review of Finance**, 16(1):31–80, 2012.
- [22] Viktor Todorov and George Tauchen. Limit theorems for power variations of pure-jump processes with application to activity estimation. **Annals Of Applied Probability**, 21(1):546–588, 2011.
- [23] Ivan Shaliastovich and George Tauchen. Pricing of the time-change risks. **Journal of Economic Dynamics and Control**, 35(6):843–858, 2011.
- [24] V. Todorov and G. Tauchen. Volatility Jumps. **Journal of Business and Economic Statistics**, 29:356–371, 2011.
- [25] George Tauchen. Stochastic volatility in general equilibrium. **Quarterly Journal of Finance**, 1(4):707 – 731, 2011.
- [26] George Tauchen and Hao Zhou. Realized jumps on financial markets and predicting credit spreads. **Journal of Econometrics**, 160(1):102–118, 2011.
- [27] Viktor Todorov, George Tauchen, and Iaryna Gryniv. Realized laplace transforms for estimation of jump diffusive volatility models. **Journal of Econometrics**, 164(2):367 – 381, 2011.

- [28] Viktor Todorov and George Tauchen. Activity signature functions for high-frequency data analysis. **Journal of Econometrics**, 154(2):125–138, 2010.
- [29] Tim Bollerslev, Uta Kretschmer, Christian Pigorsch, and George Tauchen. A discrete-time model for daily S&P 500 returns and realized variations: Jumps and leverage effects. **Journal of Econometrics**, 150(2):151–166, 2009.
- [30] Tim Bollerslev, George Tauchen, and Hao Zhou. Expected stock returns and variance risk premia. **Review of Financial Studies**, 22(11):4463–4492, 2009.
- [31] Tim Bollerslev, Tzuo Hann Law, and George Tauchen. Risk, jumps, and diversification. **Journal of Econometrics**, 144(1):234–256, 2008.
- [32] Ravi Bansal, A. Ronald Gallant, and George Tauchen. Rational pessimism, rational exuberance, and asset pricing models. **Review of Economic Studies**, 74(4):1005–1033, 2007.
- [33] Viktor Todorov and George Tauchen. Simulation methods for levy-driven continuous-time autoregressive moving average (carma) stochastic volatility models. **Journal of Business and Economic Statistics**, 24(4):455–469, 2006.
- [34] Tim Bollerslev, Julia Litvinova, and George Tauchen. Leverage and volatility feedback effects in high-frequency data. **Journal of Financial Econometrics**, 4(3):353–384, 2006.
- [35] Xin Huang and George Tauchen. The relative contribution of jumps to total price variance. **Journal of Financial Econometrics**, 3(4):456–499, 2005.
- [36] Ravi Bansal, George Tauchen, and Hao Zhou. Regime shifts, risk premiums in the term structure, and the business cycle. **Journal of Business and Economic Statistics**, 22(4):396–409, 2004.
- [37] Eric Ghysels and George Tauchen. Frontiers of financial econometrics and financial engineering. **Journal of Econometrics**, 116(1-2):1–7, 2003.
- [38] M. Chernov, A. R. Gallant, E. Ghysels, and G. Tauchen. Alternative models for stock price dynamics. **Journal of Econometrics**, 116:225–257, 2003.
- [39] George Tauchen. Numerical techniques for maximum likelihood estimation of continuous-time diffusion processes: Comment. **Journal of Business and Economic Statistics**, 20(3):331–332, 2002.
- [40] George Tauchen. Notes on financial econometrics. **Journal of Econometrics**, 100(1):57–64, 2001.
- [41] Chae-Shick Chung and George Tauchen. Testing target-zone models using efficient method of moments. **Journal of Business and Economic Statistics**, 19(3):255–269, 2001.
- [42] George Tauchen. The bias of tests for a risk premium in forward exchange rates. **Journal of Empirical Finance**, 8(5):695–704, 2001.

- [43] A. Ronald Gallant and George Tauchen. The relative efficiency of method of moments estimators. **Journal of Econometrics**, 92(1):149–172, 1999.
- [44] A. Ronald Gallant, Chien-Te Hsu, and George Tauchen. Using daily range data to calibrate volatility diffusions and extract the forward integrated variance. **Review of Economics and Statistics**, 81(4):617–631, 1999.
- [45] A. Ronald Gallant and George Tauchen. Reprojecting partially observed systems with application to interest rate diffusions. **Journal of the American Statistical Association**, 93(441):10–24, 1998.
- [46] George Tauchen. The objective function of simulation estimators near the boundary of the unstable region of the parameter space. **Review of Economics and Statistics**, 80(3):389–398, 1998.
- [47] George Tauchen. *New Minimum Chi-Square Methods in Empirical Finance.*, pages 279–317. **Econometric Society Monographs, no. 28.**, Cambridge, 1997.
- [48] A. Ronald Gallant and George Tauchen. Estimation of continuous-time models for stock returns and interest rates. **Macroeconomic Dynamics**, 1(1):135–168, 1997.
- [49] A. Ronald Gallant, David Hsieh, and George Tauchen. Estimation of stochastic volatility models with diagnostics. **Journal of Econometrics**, 81(1):159–192, 1997.
- [50] A. Ronald Gallant and George Tauchen. Which moments to match?. **Econometric Theory**, 12(4):657–681, 1996.
- [51] George Tauchen, Harold Zhang, and Ming Liu. Volume, volatility, and leverage: A dynamic analysis. **Journal of Econometrics**, 74(1):177–208, 1996.
- [52] A. Ronald Gallant, Peter E. Rossi, and George Tauchen. Nonlinear dynamic structures. **Econometrica**, 61(4):871–907, 1993.
- [53] George Tauchen. Remarks on my term at JBES. **Journal of Business and Economic Statistics**, 11(4):428–431, 1993.
- [54] A. Ronald Gallant, Peter E. Rossi, and George Tauchen. Stock prices and volume. **Review of Financial Studies**, 5(2):199–242, 1992.
- [55] George Tauchen and Robert Hussey. Quadrature-based methods for obtaining approximate solutions to nonlinear asset pricing models. **Econometrica**, 59(2):371–396, 1991.
- [56] A. Ronald Gallant, David A. Hsieh, and George E. Tauchen. *On Fitting a Recalcitrant Series: The Pound/Dollar Exchange Rate, 1974-1983.*, pages 199–240. International Symposia in Economic Theory and Econometrics series, NC State U, 1991.

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- [58] A. Ronald Gallant, Lars Peter Hansen, and George Tauchen. Using conditional moments of asset payoffs to infer the volatility of intertemporal marginal rates of substitution. **Journal of Econometrics**, 45(1-2):141–179, 1990.
- [59] Ronald Gallant and George Tauchen. Semiparametric estimation of conditionally constrained heterogeneous processes: Asset pricing applications. **Econometrica**, 57(5):1091–1120, 1989.
- [60] Michael K. Salemi and George E. Tauchen. *Simultaneous Nonlinear Learning Models.*, pages 207–223. International Series in Economic Modeling, 1987.
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- [62] George Tauchen. An investigation of transactions data for nyse stocks: Discussion. **Journal of Finance**, 40(3):739–741, 1985.
- [63] Philip J. Cook and George Tauchen. The effect of minimum drinking age legislation on youthful auto fatalities, 1970-1977. **The Journal of Legal Studies**, 13:169–190, 1984.
- [64] George E. Tauchen and Mark Pitts. The price variability-volume relationship on speculative markets. **Econometrica**, 51(2):485–505, 1983.
- [65] Michael K. Salemi and George E. Tauchen. Estimation of nonlinear learning models. **Journal of the American Statistical Association**, 77(380):725–731, 1982.
- [66] Philip J. Cook and George Tauchen. The effect of liquor taxes on heavy drinking. **Bell Journal of Economics**, 13(2):379–390, 1982.
- [67] George E. Tauchen. Some evidence on cross-sector effects of the minimum wage. **Journal of Political Economy**, 89(3):529–547, 1981.
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[26] [27] [28] [29] [30] [31] [32] [33] [34] [35] [36] [37] [38] [39] [40] [41] [42] [43] [44] [45] [46] [47] [48] [49]  
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Areas of Research. Research Programs and Scholarly Activity. The CIS department is strong in spatial, temporal and graph data mining as well as big data analytics with applications to biomedical databases. Research work in this area concentrates on topics such as retrieval, management, and inference on biomedical, image, audio, and video databases. The group's research in video retrieval concentrates on modeling spatial and temporal context in human action analysis. Areas of Strength: Some areas of strength in Bioinformatics include the development of effective tools for analysis and prediction of protein-protein, protein-RNA, protein-DNA interfaces and interactions, for predicting epitopes and designing vaccines, and for annotating genomes. Cognitive science has emerged as a transdisciplinary research area that has basic-level roots in philosophy, psychology, computer science, neuroscience, linguistics, anthropology, and sociology. Areas of research interest (ARI) give details about the main research questions facing government departments. Published 28 June 2017 Last updated 6 June 2019 see all updates. If you are interested in working with a department on a research question, please use the contact details within the relevant ARI. If you have general comments to make on the format of the ARIs, please contact the Government Office for Science. Departments' Areas of Research Interest. DH areas of research interest.