A. Ronald Gallant
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EXPERIENCE

Jan. 2022 to present	*Retired* Emeritus Professor (in residence), University of North Carolina, Chapel Hill, North Carolina Emeritus Professor, The Pennsylvania State University, University Park, Pennsylvania
Aug. 2013 to present	*The Pennsylvania State University,* University Park, Pennsylvania Emeritus Professor of Economics, Liberal Arts Professor of Economics, previously Graduate teaching: econometric theory, computational econometrics; Undergraduate teaching: environmental economics
Jan. 2003 to July 2013	*Duke University,* Durham, North Carolina Hanes Corporation Foundation Professor of Business Administration, Fuqua School of Business. MBA teaching: data mining, forecasting, environmental economics; Graduate teaching: computational econometrics.
Jan. 2010 to Dec. 2013	*New York University,* New York City, New York Distinguished Scientist in Residence, Department of Economics Graduate teaching: computational econometrics.
July 1993 to present	*University of North Carolina,* Chapel Hill, North Carolina Emeritus Professor of Economics. Adjunct Professor of Statistics and Henry A. Latané Distinguished Professor of Economics previously. Graduate teaching: nonlinear and nonparametric econometrics, mathematical statistics.
March 1983 to Aug. 2013	*Duke University,* Durham, North Carolina Professor of Economics (secondary appointment), Department of Economics, Research Professor previously. Graduate teaching: topics in econometrics.
July 1971 to June 1993	*North Carolina State University,* Raleigh, North Carolina Drexel Professor of Statistics and Economics. Assistant, Associate, and Full Professor previously. Graduate teaching: econometrics, linear models, multivariate linear and nonlinear models, time series analysis, statistical inference, statistical computing. Undergraduate teaching: mathematical statistics.
Sept. 1987 to June 1988	*University of Chicago,* Chicago, Illinois Visiting Professor of Econometrics, Graduate School of Business. Graduate teaching: advanced econometrics.
Sept. 1982 to June 1983	*Northwestern University,* Evanston, Illinois Visiting Professor, Department of Economics and J. L. Kellogg Graduate School of Management. Graduate teaching: advanced econometrics, MBA teaching: calculus level statistics.
Sept. 1979 to June 1980	*Duke University,* Durham, North Carolina Visiting Associate Professor, Department of Economics. Graduate teaching: econometrics, mathematical statistics.
Sept. 1975 to June 1976	*University of Chicago,* Chicago, Illinois Visiting Assistant Professor of Statistics, Graduate School of Business. MBA teaching: calculus and non-calculus level statistics.

EDUCATION

Sept. 1967 to June 1971	*Iowa State University,* Ames, Iowa Ph.D. in statistics with minor in mathematics. Snedecor Award, Phi Kappa Phi, Mu Sigma Rho, NDEA Fellowship.
Sept. 1965 to June 1967	*University of California at Los Angeles,* Los Angeles, California M.B.A. with major in marketing. Beta Gamma Sigma.
Sept. 1960 to June 1965	*San Diego State University,* San Diego, California A.B. in mathematics. Graduation with honors and distinction in mathematics.

PROFESSIONAL SERVICE AND AWARDS

Fellow *American Statistical Association*, 1983.

Fellow *Econometric Society*, 1985.

Journal of Econometrics Fellow, 1988.

Fellow *Society for Financial Econometrics*, 2012.

Board of Directors, American Statistical Association, 1987–1988.

Board of Directors, National Bureau of Economic Research, 1990–2004, Executive Committee, 1997–2004.

Board of Trustees, National Institute of Statistical Sciences, 1991–1997.

NCSU Alumni Association Outstanding Research Award, 1988.

D. D. Mason Faculty Award, 1984.

Organizer, with T. M. Gerig, of Computer Science and Statistics: Eleventh Annual Symposium on the Interface, March 1978.

Organizer, with William A. Barnett, of the Conference on New Approaches to Modeling, Specification Selection, and Econometric Inference, May 1984.

Lecturer in the Program of Visiting Lecturers in Statistics, 1976–1982.

President, North Carolina Chapter of the ASA, 1979.

ASA Committee on the Evaluation of Statistical Software, 1979–1982.

Program Chairman, Business and Economics Section, ASA, 1983.

President, Business and Economics Section, ASA, 1990.

Publications Committee, ASA: B&E Section Representative, 1985; *JBES* Representative, 1986–1989.

Program Committee, Econometric Society: 1986 Summer Meetings, 1990 World Congress.

Journals Management Committee, ASA, 1992–1997.

Outstanding Statistical Application Award, ASA, 1993.

National Science Foundation Panels: Economics 1995–1997, MSBS 2004, MMS 2005–2006.

JBES Invited Paper, 2001 Annual Meetings of the American Statistical Association.

Board of the Social Science Research Institute, Duke University, 2004–2007.

Member Executive Committee of the Academic Council, Duke University, 2004–2005, 2007–2008.

Nonlinear and Financial Econometrics Conference, A Tribute to A. Ronald Gallant, Toulouse School of Economics, May 19-21, 2011

A. Ronald Gallant Distingusihed Professorship created by the University of North Carolina, Chapel Hill, NC, March 2014.

Fellow *Institute for Nonlinear Dynamical Inference,* Moscow, 2017.

Founding Fellow of the *International Association for Applied Econometrics,* UK, 2017.

Econometric Conference on Big Data and AI in Honor of Ronald Gallant, Tsinghua University, Beijing China, December 21, 2018.

Annals volume of the *Journal of Econometrics* in honor of A. Ronald Gallant, 2021.

Representative from Methodology, Measurement, and Statistics to the Committee of Visitors, Division of Social and Economic Sciences, National Science Foundation, May 24–26, 2021.

FOREIGN LANGUAGE

French.

EDITORIAL SERVICE

Editor: *Journal of Business and Economic Statistics*, 1986–1989.

Associate Editor: *Journal of Econometrics*, 1977–1985, 1990–1991; *American Statistician*, 1979; *Journal of the American Statistical Association*, Theory and Methods Section, 1983–1985.

Co-Editor: *Journal of Econometrics*, 1991–2011.

SHORT TERM APPOINTMENTS AND VISITS

Securities Exchange Commission, Washington, D.C., Financial Economist, Directorate of Economic and Policy Research, July 1977.

Laboratoire d'Econometrie de l'Ecole Polytechnique, Paris, France, June and July 1978.

Institut National de la Statistique et des Etudes Economique, Paris, France, July 1979, September 1982, July 1984, July 1998.

Colegio de Postgraduados, Chapingo, Mexico, Centro de Estadistica y Calculo, June 1981.

Empresa Brasileira de Pesquisa Agropecuaria, Brasilia, Brazil, July 1981, August 1989.

Stanford University, Stanford, California, Department of Computer Science, June and July 1982.

University of California at San Diego, La Jolla, California, Department of Economics, June 1983, July 1987, July 1989, July 1992, July 1997, July 1999.

Universidad Nacional Autonoma de Mexico, Mexico City, Mexico, Instituto de Investigaciones en Matematicas Aplicadas y en Sistemas, December 1986.

Board of Governors, Federal Reserve System, Washington DC, June 1994.

University of Tilburg, Tilburg, The Netherlands, June 1994.

Instituto Tecnologico Autonomo de Mexico, Mexico City, June 1995.

Tel Aviv University, Tel Aviv, Israel, June 1996.

Australian National University, Canberra, Australia, July 1996.

Princeton University, Princeton NJ, Department of Economics, Visiting Fellow, February–May, 2000.

University of Chicago, Graduate School of Business, February 2002, Spring Quarter 2004 (taught datamining).

CIRANO and University of Montreal, Montreal, Quebec, Canada, April 2003.

University of Uppsala, Uppsala, Sweden, October 2003.

New York University, Department of Economics, Spring Semester 2009, (taught computational economics).

National Center of Atmospheric Research, Boulder, Colorado, July–September, 2010, (sabbatical, research on climate models).

Stanford University, Department of Economics, October-December, 2010, (sabbatical, research on the econometrics of dynamic games).

Yale University, Cowles Foundation, May 5–9, 2014.

DISSERTATION

Gallant, A. Ronald (1971), "Statistical Inference for Nonlinear Regression Models," Ph.D. Dissertation, Iowa State University, 114 pages.

ARTICLES

Gallant, A. R. (1968), "A Note on the Measurement of Cost/Quantity Relationships in the Aircraft Industry," *Journal of the American Statistical Association* 63, 1247–1252.

Gallant, A. R., and Wayne A. Fuller (1973), "Fitting Segmented Polynomial Regression Models Whose Join Points Have To Be Estimated," *Journal of the American Statistical Association* 68, 144–147.

Gallant, A. R., Thomas M. Gerig, and J. W. Evans (1974), "Time Series Realizations Obtained According to an Experimental Design," *Journal of the American Statistical Association* 69, 639–645.

Shumway, C. R., P. M. Maber, N. R. Baker, W. E. Sonder, A. H. Rubenstein, and A. R. Gallant (1975), "Diffuse Decision Making in Hierarchical Organizations: An Empirical Examination," *Management Science* 21, 697–707.

Gallant, A. R. (1975), "The Power of the Likelihood Ratio Test of Location in Nonlinear Regression Models", *Journal of the American Statistical Association* 70, 198–203.

Gerig, Thomas M., and A. Ronald Gallant (1975), "Computing Methods for Constrained Linear Models", *Journal of Statistical Computation and Simulation* 3, 283–296.

Gallant, A. Ronald (1975), "Seemingly Unrelated Nonlinear Regression Models", *Journal of Econometrics* 3, 35–50.

Gallant, A. R. (1975), "Nonlinear Regression", *The American Statistician* 29, 73–81.

Gallant, A. R. (1975), "Testing a Subset of the Parameters of a Nonlinear Regression Model", *Journal of the American Statistical Association* 70, 927–932.

Chao, Nelson P. C., John A. Cuculo, A. Ronald Gallant, and T. Waller George (1975), "A Statistical Method for Determining the Glass Transition Temperature from Dilatometric Data," *Applied Polymer Symposium* 27, 193–204.

Gallant, A. Ronald, and J. Jeffery Goebel (1976), "Nonlinear Regression with Auto-correlated Errors," *Journal of the American Statistical Association* 71, 961–967.

Gallant, A. Ronald (1977), "Three Stage Least Squares Estimation for a System of Simultaneous, Nonlinear, Implicit Equations," *Journal of Econometrics* 5, 71–88.

Gallant, A. Ronald (1977), "Testing a Nonlinear Regression Specification: A Nonregular Case," *Journal of the American Statistical Association* 72, 523–530.

Gallant, A. Ronald, and Dale W. Jorgenson (1979), "Statistical Inference for a System of Simultaneous, Nonlinear, Implicit Equations in the Context of Instrumental Variable Estimation," *Journal of Econometrics* 11, 275–302. Reprinted in Dale W. Jorgenson (2000), *Econometrics Volume 1: Econometric Modeling of Producer Behavior*, The MIT Press, Cambridge MA, Chapter 11, 311-339.

Gallant, A. Ronald, and Thomas M. Gerig (1980), "Computations for Constrained Linear Models," *Journal of Econometrics* 12, 59–84.

Gallant, A. Ronald, and Alberto Holly (1980), "Statistical Inference in an Implicit Nonlinear, Simultaneous Equation Model in the Context of Maximum Likelihood Estimation," *Econometrica* 48, 697–720.

Gallant, A. Ronald (1980), "Explicit Estimators of Parametric Functions in Nonlinear Regression," *Journal of the American Statistical Association* 75, 182–193.

Gallant, A. Ronald (1981), "On the Bias in Flexible Functional Forms and an Essentially Unbiased Form: The Fourier Flexible Form," *Journal of Econometrics* 15, 211–245.

Burguete, Jose F., A. Ronald Gallant, and Geraldo Souza (1982), "On Unification of the Asymptotic Theory of Nonlinear Econometric Models," *Econometric Reviews* 1, 151–190.

Gallant, A. Ronald (1982), "Unbiased Determination of Production Technologies," *Journal of Econometrics* 20, 285–323.

Aguirre-Torres, Victor, and A. Ronald Gallant (1983), "The Null and Non-null Asymptotic Distribution of the Cox Test for Multivariate Nonlinear Regression Alternatives and a New Distribution Free Cox Test," *Journal of Econometrics* 21, 5–33.

Elbadawi, Ibrahim, A. Ronald Gallant, and Geraldo Souza (1983), "An Elasticity Can be Estimated Consistently Without A Priori Knowledge of Functional Form," *Econometrica* 51, 1731–1752.

Gallant, A. Ronald, and Roger W. Koenker (1984), "Costs and Benefits of Peak-Load Pricing of Electricity: A Continuous-Time Econometric Approach," *Journal of Econometrics* 26, 83–114.

Gallant, A. Ronald (1984), "The Fourier Flexible Form," *American Journal of Agricultural Economics* 66, 204–208.

Gallant, A. Ronald, and Gene H. Golub (1984), "Imposing Curvature Restrictions on Flexible Functional Forms," *Journal of Econometrics* 26, 295–322.

Chalfant, James A., and A. Ronald Gallant (1985), "Estimating Substitution Elasticities with the Fourier Cost Function: Some Monte Carlo Results," *Journal of Econometrics* 28, 205–222.

Gallant, A. Ronald, and John F. Monahan (1985), "Explicitly Infinite Dimensional Bayesian Analysis of Production Technologies," *Journal of Econometrics* 30, 171–201. Reprinted in Barnett, William A., and A. Ronald Gallant, eds. (1990), *New Approaches to Modeling, Specification Selection, and Econometric Inference, Proceedings of the First International Symposium in Economic Theory and Econometrics*, Cambridge University Press, Cambridge UK, 171–201.

Gallant, A. Ronald (1987), "Identification and Consistency in Seminonparametric Regression," in Bewley, Truman F., ed. (1987), *Advances in Econometrics Fifth World Congress, Volume 1*, Cambridge University Press, New York, 145–170. Translated as Gallant, A. Ronald (1985), "Identification et Convergence en Regression Semi-Nonparametrique," *Annals de l'INSEE* 59/60, 239–267.

Gallant, A. Ronald, and Douglas W. Nychka (1987), "Semi-Nonparametric Maximum Likelihood Estimation," *Econometrica* 55, 363–390.

Gallant, A. Ronald (1987), "Nonlinear Methods in Econometrics," in Eatwell, John, Murray Milgate, and Peter Newman, eds. (1987), *The New Palgrave*, Stockton Press, New York, Vol. 3 (K–P), 663–666. Reprinted in Eatwell, John, Murray Milgate, and Peter Newman, eds. (1990), *Econometrics*, The Macmillan Press, London, 160–166.

Gallant, A. Ronald, and Halbert L. White Jr. (1988), "There Exists a Neural Network That Does Not Make Avoidable Mistakes," *Proceedings of the Second Annual IEEE Conference on Neural Networks*, IEEE Press, New York, I:657–664. Revised and reprinted in White Jr., Halbert L. (1992), *Artificial Neural Networks*, Blackwell, Oxford UK, 5–11.

Aguirre-Torres, Victor, A. R. Gallant, and Jorge Cominguez (1989), "On Choosing Between Two Nonlinear Models Estimated Robustly: Some Monte Carlo Evidence," *Communications in Statistics, Simulation and Computation* 18, 179–200.

Gallant, A. Ronald, and George Tauchen (1989), "Seminonparametric Estimation of Conditionally Constrained Heterogeneous Processes: Asset Pricing Applications," *Econometrica* 57, 1091–1120.

Gallant, A. Ronald, Lars Peter Hansen, and George E. Tauchen (1990), "Using Conditional Moments of Asset Payoffs to Infer the Volatility of Intertemporal Marginal Rates of Substitution," *Journal of Econometrics*, 45, 141–180.

Nychka, Douglas W., Stephen P. Ellner, Daniel F. McCaffrey, and A. Ronald Gallant (1990), "Statistics for Chaos," *Statistical Computing and Statistical Graphics Newsletter* 1, 4–11.

Gallant, A. Ronald, David A. Hsieh, and George E. Tauchen (1991), "On Fitting a Recalcitrant Series: The Pound/Dollar Exchange Rate, 1974–83," in Barnett, William A., James Powell, and George E. Tauchen, eds. (1991), *Nonparametric and Semiparametric Methods in Econometrics and Statistics, Proceedings of the Fifth International Symposium in Economic Theory and Econometrics*, Cambridge University Press, Cambridge, Chapter 8, 199–240.

Gallant, A. Ronald, and Geraldo Souza (1991), "On the Asymptotic Normality of Fourier Flexible Form Estimates," *Journal of Econometrics* 50, 329–353.

Eastwood, Brian J., and A. Ronald Gallant (1991), "Adaptive Rules for Seminonparametric Estimators That Achieve Asymptotic Normality," *Econometric Theory* 7, 307–340.

Gallant, A. Ronald (1991), "Comment on B. Potscher and I. Prucha 'Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models' " *Econometric Reviews* 10, 333–335.

Ellner, Stephen P., A. Ronald Gallant, Daniel F. McCaffrey, and Douglas W. Nychka (1991), "Convergence Rates and Data Requirements for Jacobian-based Estimates of Lyapunov Exponents from Data," *Physics Letters A* 153, 357–363.

Gallant, A. Ronald, and George Tauchen (1992), "A Nonparametric Approach to Nonlinear Time Series Analysis: Estimation and Simulation," in Brillinger, David, Peter Caines, John Geweke, Emanuel Parzen, Murray Rosenblatt, and Murad S. Taqqu eds. (1992), *New Directions in Time Series Analysis, Part II.* Springer–Verlag, New York, 71–92.

Gallant, A. Ronald and Halbert L. White Jr. (1992) "On Learning the Derivatives of an Unknown Mapping with Multilayer Feedforward Networks," *Neural Networks* 5, 129–138. Revised and reprinted in White Jr., Halbert L. (1992), *Artificial Neural Networks*, Blackwell, Oxford UK, 206–223.

McCaffrey, Daniel F., Stephen P. Ellner, A. Ronald Gallant, and Douglas W. Nychka (1992), "Estimating the Lyapunov Exponent of a Chaotic System with Nonparametric Regression," *Journal of the American Statistical Association* 87, 682–695.

Gallant, A. Ronald, Peter E. Rossi, and George E. Tauchen (1992), "Stock Prices and Volume," *The Review of Financial Studies* 5, 199–242.

Nychka, Douglas W., Stephen P. Ellner, A. Ronald Gallant, and Daniel F. McCaffrey (1992), "Finding Chaos in Noisy Systems," *Journal of the Royal Statistical Society B* 54, 399–426.

Davidian, Marie, and A. Ronald Gallant (1992), "Smooth Nonparametric Maximum Likelihood Estimation for Population Pharmacokinetics, with Application to Quinidine," *Journal of Pharmacokinetics and Biopharmaceutics* 20, 529–556.

Davidian, Marie, and A. Ronald Gallant (1993), "The Nonlinear Mixed Effects Model with a Smooth Random Effects Density," *Biometrika* 80, 475–488.

Gallant, A. Ronald, Peter E. Rossi, and George E. Tauchen (1993), "Nonlinear Dynamic Structures," *Econometrica* 61, 871–907.

Bansal, Ravi, A. Ronald Gallant, Robert Hussey, and George Tauchen (1993), "Computational Aspects of Nonparametric Simulation Estimation," in Belsley, David A., ed. (1993), *Computational Techniques for Econometrics and Economic Analysis*, Kluwer Academic Publishers, Boston, 3-22.

McCaffrey, Daniel F., and A. Ronald Gallant (1994), "Convergence Rates for Single Hidden Layer Feedforward Networks," *Neural Networks* 7, 147–158.

Ellner, Stephen P., A. Ronald Gallant, and James Theiler (1995), "Detecting Nonlinearity and Chaos in Epidemic Data," in Mollison, Dennis, ed. (1995), *Epidemic Models: Their Structure and Relation to Data*, Cambridge University Press, Cambridge, UK, 229–247.

Bansal, Ravi, A. Ronald Gallant, Robert Hussey, and George Tauchen (1994), "Nonparametric Estimation of Structural Models for High-Frequency Currency Market Data," *Journal of Econometrics* 66, 251–287.

Barnett, William A., A. Ronald Gallant, Melvin J. Hinich, Jochen A. Jungeilges, Daniel T. Kaplan, and Mark J. Jensen (1995), "Robustness of Nonlinearity and Chaos Tests to Measurement Error, Inference Method, and Sample Size," *Journal of Economic Behavior and Organization* 27, 301–320.

Barnett, William A., A. Ronald Gallant, Melvin J. Hinich, and Jochen A. Jungeilges (1996), "Comparisons of the Available Tests for Nonlinearity and Chaos," in Barnett, William A., Giancarlo Gandolfo, and Claude Hillinger eds. (1996), *Dynamic Disequilibrium Modeling: Theory and Applications*, Cambridge University Press, Cambridge, 313–346.

Barnett, William A., A. Ronald Gallant, Melvin J. Hinich, Jochen A. Jungeilges, Daniel T. Kaplan, and Mark J. Jensen (1996), "An Experimental Design to Compare Tests of Nonlinearity and Chaos," in Barnett, William A., Alan P. Kirman, and Mark Salmon, eds. (1996), *Nonlinear Dynamics and Economics*, Cambridge University Press, Cambridge, 163–190.

Fenton, Victor M., and A. Ronald Gallant (1996), "Convergence Rates of SNP Density Estimators," *Econometrica* 64, 719–727.

Fenton, Victor M., and A. Ronald Gallant (1996), "Erratum [Convergence Rates of SNP Density Estimators," *Econometrica* 64, 1493.

Fenton, Victor M., and A. Ronald Gallant (1996), "Qualitative and Asymptotic Performance of SNP Density Estimators," *Journal of Econometrics* 74, 77–118.

Gallant, A. Ronald, and George Tauchen (1996), "Which Moments to Match?," *Econometric Theory* 12, 657–681.

Gallant, A. Ronald, and George Tauchen (1996), "Specification Analysis of Continuous Time Models in Finance," in Rossi, Peter, ed. (1996) *Modeling Stock Market Volatility: Bridging the Gap to Continuous Time*, Academic Press, New York, 357–384.

Gallant, A. Ronald, David Hsieh, George Tauchen (1997), "Estimation of Stochastic Volatility Models with Diagnostics," *Journal of Econometrics* 81, 159–192.

Gallant, A. Ronald, and Jonathan R. Long (1997), "Estimating Stochastic Differential Equations Efficiently by Minimum Chi-Squared," *Biometrika* 84, 125–141.

Gallant, A. Ronald, and George Tauchen (1997), "Estimation of Continuous Time Models for Stock Returns and Interest Rates" *Macroeconomic Dynamics* 1, 135–168.

Barnett, William A., A. Ronald Gallant, Melvin J. Hinich, Jochen A. Jungeilges, Daniel T. Kaplan, and Mark J. Jensen (1998), "A Single-Blind Controlled Competition Among Tests for Nonlinearity and Chaos," *Journal of Econometrics* 82, 157–192.

Gallant, A. Ronald, and George Tauchen (1998), "Reprojecting Partially Observed Systems with Application to Interest Rate Diffusions," *Journal of the American Statistical Association* 93, 10-24.

Ellner, S. P., B. A. Bailey, G. V. Bobashev, A. R. Gallant, B. T. Grenfell, and D. W. Nychka (1998), "Noise and Nonlinearity in Measles Epidemics: Combining Mechanistic and Statistical Approaches to Population Modeling," *The American Naturalist* 151, 425–440.

Gallant, A. Ronald, and George Tauchen (1999), "The Relative Efficiency of Method of Moments Estimators," *Journal of Econometrics* 92, 149–172.

Gallant, A. Ronald, Chien-Te Hsu, and George Tauchen (1999) "Using Daily Range Data to Calibrate Volatility Diffusions and Extract the Forward Integrated Variance" *The Review of Economics and Statistics* 81(4), 617–631.

Fleissig, Adrian R., A. Ronald Gallant, and John J. Seater (2000), "Separability, Aggregation, and Euler Equation Estimation," *Macroeconomic Dynamics* 4, 547–572.

Ahn, Dong-Hyun, Robert F. Dittmar, and A. Ronald Gallant (2002), "Quadratic Term Structure Models: Theory and Evidence," *The Review of Financial Studies* 15, 243–288.

Aguirre-Torres, Victor, and A. Ronald Gallant (2001), "Testing Separate Dynamic Nonlinear Econometric Models" in G.I Schueler and P.D. Spanos (eds) (2001), *Monte Carlo Simulation* A. A. Balkema, Rotterdam, 423–430.

Durham, Garland B., and A. Ronald Gallant (2002), "Numerical Techniques for Maximum Likelihood Estimation of Continuous-Time Diffusion Processes," *Journal of Business and Economic Statistics*" 20, 297–316.

Ahn, Dong-Hyun, Robert F. Dittmar, A. Ronald Gallant, and Bin Gao (2003), "Purebred or Hybrid?: Reproducing the Volatility in Term Structure Dynamics," *Journal of Econometrics* 116, 147–180.

Coppejans, Mark, and A. Ronald Gallant (2002), "Cross-Validated SNP Density Estimates," *Journal of Econometrics* 110, 27–65.

Chernov, Mikhail, A. Ronald Gallant, Eric Ghysels, and George Tauchen (2003), "Alternative Models for Stock Price Dynamics," *Journal of Econometrics* 116, 225–257.

Gallant, A. Ronald (2007), "Comment" on the *JBES* Invited Paper entitled "On the Fit of New-Keynesian Models," authored by Marco Del Negro, Frank Schorfheide, Frank Smets, and Raf Wouters. *Journal of Business and Economic Statistics* 25. 151–152.

Bansal, Ravi, A. Ronald Gallant, and George Tauchen (2007), "Rational Pessimism, Rational Exuberance, and Asset Pricing Models," *Review of Economic Studies* 74, 1005–1033.

Gallant, A. Ronald, and Han Hong (2007), "A Statistical Inquiry into the Plausibility of Recursive Utility," *Journal of Financial Econometrics* 5, 523–559.

Cheng, Ai-ru (Meg), A. Ronald Gallant, Chuanshu Ji, and Beom S. Lee (2008), "A Gaussian Approximation Scheme for Computation of Option Prices in Stochastic Volatility Models," *Journal of Econometrics* 146, 44–58.

Gallant, A. Ronald (2008), "SNP: Nonparametric Time Series Analysis," in Blume, Larry, and Steven Durlauf, eds. (2008), *The New Palgrave, 2nd edition*, Palgrave Macmillan Ltd., Houndmills, UK.

Gallant, A. Ronald, and Robert E. McCulloch (2009), "On the Determination of General Scientific Models with Application to Asset Pricing," *Journal of the American Statistical Association* 104, 117–131.

Gallant, A. Ronald, and George Tauchen (2010), "Simulated Score Methods and Indirect Inference for Continuous-time Models," in Yacine Aït-Sahalia and Lars Peter Hansen, eds. (2010), *Handbook of Financial Econometrics, Volume 1 — Tools and Techniques* Elsevier/North-Holland, Amsterdam, 427–478.

Aldrich, Eric M., Jesús Fernández-Villaverde, A. Ronald Gallant, and Juan F. Rubio-Ramírez (2011), "Tapping the Supercomputer Under Your Desk: Solving Dynamic Equilibrium Models with Graphics Processors," *Journal of Economic Dynamics and Control* 35, 386–393.

Aldrich, Eric M., and A. Ronald Gallant (2011), "Habit, Long-Run Risks, Prospect? A Statistical Inquiry," *Journal of Financial Econometrics* 9, 589–618.

Gallant, A. Ronald (2016), "Reflections on the Probability Space Induced by Moment Conditions with Implications for Bayesian Inference," *Journal of Financial Econometrics* 14, 229–247.

Gallant, A. Ronald (2016), "Reply to Comment on Reflections," *Journal of Financial Econometrics* 14, 284–294.

Gallant, A. Ronald, Han Hong, and Ahmed Khawaja (2017), "The Dynamic Spillovers of Entry: An Application to the Generic Drug Industry," *Management Science*, 64, 983–1476.

Gallant, A. Ronald, Raffaella Giacomini, Giuseppe Ragusa (2017), "Bayesian Estimation of State Space Models Using Moment Conditions," *Journal of Econometrics* 201, 198–211.

Gallant, A. Ronald, Han Hong, and Ahmed Khawaja (2017), "A Bayesian Approach to Estimation of Dynamic Models with Small and Large Number of Heterogeneous Players and Latent Serially Correlated States," *Journal of Econometrics* 203, 19–32.

Gallant, A. Ronald, and George Tauchen (2017), "Exact Bayesian Moment Based Inference for the Distribution of the Small-Time Movements of an Ito Semimartingale," *Journal of Econometrics* 201, 140–155.

Gallant, A. Ronald, Mohammad R. Jahan-Parvar, Hening Liu (2018), "Does Smooth Ambiguity Matter for Asset Pricing?," *The Review of Financial Studies* 32, 3617–3666.

Gallant, A. Ronald (2020), "Complementary Bayesian Method of Moments Strategies," *The Journal of Applied Econometrics* 35, 422–439.

Gallant, A. Ronald, Han Hong, Michael P. Leung, Jessie Li (2022), "Constrained Estimation Using Penalization and MCMC," *Journal of Econometrics* 228, 85–106.

Gallant, A. Ronald (2022), "Nonparametric Bayes Subject to Overidentified Moment Conditions," *Journal of Econometrics* 228, 27–38.

Gallant, A. Ronald, and George Tauchen (2021), "Cash Flows Discounted Using a Model Free SDF Extracted under a Yield Curve Prior," *Journal of Risk and Financial Management* 14, 1–15 `https://doi.org/10.3390/jrfm14030100`

Gallant, A. Ronald (2022), “Variance-Covariance from a Metropolis Chain on a Curved, Singular Manifold,” *Journal of Econometrics.* Forthcoming,

Gallant, A. Ronald (2023), “Experience as Co-Editor,” *Journal of Econometrics* 234, 11–11.

BOOKS

Gallant, A. Ronald (1987), *Nonlinear Statistical Models*, John Wiley and Sons, New York, 610 pages. ISBN 0-471-80260-3

Gallant, A. Ronald, and Halbert L. White, Jr. (1987), *A Unified Theory of Estimation and Inference for Nonlinear Dynamic Models*, Basil Blackwell Ltd., Oxford, 155 pages. ISBN 0-631-15765-4
PDF available at http://www.aronaldg.org/webfiles/gwbook/

Gallant, A. Ronald (1997), *An Introduction to Econometric Theory: Measure Theoretic Probability and Statistics with Applications to Economics*, Princeton University Press, Princeton NJ, 208 pages. ISBN 0-691-01645-3

EDITED VOLUMES

Gallant, A. Ronald, and Thomas M. Gerig, eds. (1978), *Proceedings of Computer Science and Statistics: Eleventh Annual Symposium on the Interface.* Institute of Statistics, North Carolina State University, Raleigh, North Carolina, 411 pages.

Barnett, William A., and A. Ronald Gallant, eds. (1986), “New Approaches to Modeling, Specification Selection, and Econometric Inference”, *Journal of Econometrics* 30, 474 pages. Reprinted as Barnett, William A., and A. Ronald Gallant, eds. (1990), *New Approaches to Modeling, Specification Selection, and Econometric Inference, Proceedings of the First International Symposium in Economic Theory and Econometrics*, Cambridge University Press, Cambridge, UK, 474 pages. ISBN 0-521-38465-6

Bierens, Herman J., and A. Ronald Gallant (1997), *Nonlinear Models*, Elgar Publishing, Ltd., Cheltenham, UK, Volume I, 502 pages, Volume II, 477 pages. ISBN 1-858-98382-7

PAPERS

Gallant, A. Ronald. “Some Arguments Against the Use of Statistical Packages in Teaching Statistical Methods,” Proceedings of Computer Science and Statistics: Seventh Annual Symposium on the Interface, October 1973.

Gallant, A. Ronald, and Thomas M. Gerig. “Computing Methods for Linear Models Subject to Linear Parametric Constraints,” Invited paper, American Statistical Association, Annual Meeting, St. Louis, Missouri, August 1974.

Gallant, A. Ronald, and Thomas M. Gerig. “Computing Methods for Linear Models Subject to Linear Parametric Constraints,” Proceedings of Computer Science and Statistics: Eighth Annual Symposium on the Interface, February 1975.

Gallant, A. Ronald. “The Theory of Nonlinear Regression as it Relates to Segmented Polynomial Regressions with Estimated Join Points,” N.B.E.R. Workshop on Segmented and Switching Regressions, Madison, Wisconsin, June 1974.

Gallant, A. Ronald. “Confidence Intervals for the Parameters of a Nonlinear Regression Model,” Invited paper, American Statistical Association, Annual Meeting, Atlanta, Georgia, August 1975.

Gallant, A. Ronald. “The Role of Computers in the Teaching of Statistics,” Discussion paper, American Statistical Association Annual Meeting, Boston, Massachusetts, August 1976.

Gallant, A. Ronald. “Explicit Estimators of Parametric Functions in Nonlinear Regression,” The Fourteenth NBER-NSF Seminar on Bayesian Inference in Econometrics, Holmdel, New Jersey, June 1977.

Gallant, A. Ronald. “Nonlinear Regression,” Southern Regional Education Board, Summer Research Conference in Statistics, Arkadelphia, Arkansas, June 1979.

Gallant, A. Ronald. “Large Sample Inference for Nonlinear Regression Models,” Invited Paper, Institute of Mathematical Statistics Special Topics Meeting on Regression Analysis, Boulder, Colorado, October 1979.

Gallant, A. Ronald. “On the Unification of the Asymptotic Theory of Nonlinear Econometric Models,” Contributed paper, 1980 World Congress of the Econometric Society, Aix-en-Provence, France, August 1980.

Gallant, A. Ronald. “On the Bias in Flexible Functional Forms and an Essentially Unbiased Form: The Fourier Flexible Form,” Invited paper, Fall 1980 Econometric Society North American Meeting, Denver, Colorado, September 1980.

Gallant, A. Ronald. “Semi-Nonparametric Regression: Consumer Demand Applications,” Invited paper, American Statistical Association Annual Meeting, Toronto, Canada, August 1983.

Gallant, A. Ronald. “The Fourier Flexible Form,” Invited paper, American Agricultural Economics Association and Econometric Society, 1983 Allied Social Science Association Meetings, San Francisco, December 1983

Gallant, A. Ronald, and John F. Monahan. “Explicitly Infinite Dimensional Bayesian Analysis of Production Technologies,” New Approaches to Modeling, Specification Selection and Econometric Inference, Austin, Texas, May 1984. The Twenty-ninth NBER-NSF Seminar on Bayesian Inference in Econometrics,“ New Brunswick, New Jersey, October 1984.

Gallant, A. Ronald, and Douglas W. Nychka. “Seminonparametric Maximum Likelihood Estimation,” Summer Workshop of the Econometric Society on the Recent Developments of Non-Linear Asymptotic Econometric Methods, INSEE, Paris, France, July 1985.

Gallant, A. Ronald. “Identification and Consistency in Semi-Nonparametric Regression,” Invited paper, 1985 World Congress of the Econometric Society, Cambridge, Massachusetts, August 1985.

Gallant, A. Ronald, and George Tauchen. “Seminonparametric Estimation of Conditionally Constrained Heterogeneous Processes: Asset Pricing Applications,” Conference on “Testing Econometric Models of Intertemporal Choice,” jointly sponsored by The Econometric Society and NORC, Chicago, Illinois, October 1986. Conference on “Semiparametric and Nonparametric Inference,” University of Western Ontario, London, Ontario, May 1987. NSF-NBER Seminar on Time Series, Raleigh, North Carolina, October 1987.

Gallant, A. Ronald. “Nonlinear Statistical Models,” 42nd Annual Conference on Applied Statistics, Newark, New Jersey, December 1987.

Gallant, A. Ronald. “Nonlinear Simultaneous Equations Models,” Invited paper, SUGI-13, Orlando, Florida, March 1988.

Gallant, A. Ronald, David A. Hsieh, and George E. Tauchen. “On Fitting a Recalcitrant Series: The Pound/Dollar Exchange Rate, 1974-83,” Conference on Nonparametric and Semiparametric Methods in Econometrics and Statistics, Durham, North Carolina, May 1988, and Workshop on Econometric Estimation and Inference for Nonlinear, Dynamic Macroeconomic Models, Los Angeles, April 7-8, 1989.

Eastwood, Brian J., and A. Ronald Gallant. “Adaptive Truncation Rules for Seminonparametric Estimators That Achieve Asymptotic Normality” Invited paper, Econometric Society, 1988 Allied Social Science Association Meetings, New York, December 1988

Gallant, A. Ronald, and John W. Pratt. "Responses to Questions Relating to Statistical Theory and Business and Economic Statistics," Invited paper, Sesquicentennial Session, American Statistical Association Annual Meeting, Washington DC, August 1989, in ASA150 Proceedings, 109-120.

Gallant, A. Ronald, Lars Peter Hansen, and George Tauchen. "Using Conditional Moments of Asset Payoffs to Infer the Volatility of Intertemporal Marginal Rates of Substitution," NBER/Journal of Econometrics Conference on Econometric Methods and Financial Time Series, Boston, March 31–April 1,1989.

Gallant, A. Ronald, Peter E. Rossi, and George E. Tauchen. "Volume, Volatility, and Leverage on the NYSE," Conference on Statistical Models for Financial Volatility, San Diego, April 6–7, 1990.

Gallant, A. Ronald and George Tauchen. "A Nonparametric Approach to Nonlinear Time Series Analysis: Estimation and Simulation," Institute for Mathematics and its Applications Summer Program: New Directions in Time Series Analysis, Minneapolis, July 1–29, 1990.

Gallant, A. Ronald, Peter E. Rossi, and George E. Tauchen. "Nonlinear Dynamic Structures," NSF/NBER Time Series Conference, San Diego, CA, October 19–20, 1990.

Gallant, A. Ronald. "Nonlinear Regression: Where Has It Been in the Last Twenty Years and Where is it Going," Keynote address, The Northern New Jersey Chapter of the ASA 13th Annual Spring Symposium, Nonlinear Models, Murray Hill, NJ, May 13, 1991.

Gallant, A. Ronald, and George Tauchen. "A Nonparametric Approach to Nonlinear Time Series Analysis: Estimation and Simulation," Invited paper, American Statistical Association, Annual Meeting, Atlanta, Georgia, August 1991.

McCaffrey, Daniel F., and A. Ronald Gallant. "Convergence Rates for Single Hidden Layer Feedforward Networks," Invited paper, American Statistical Association, Annual Meeting, Atlanta, Georgia, August 1991.

Ellner, Stephen, A. Ronald Gallant, and Douglas Nychka. "Finding Chaos in Noisy Systems with Neural Nets," The Fourth North Carolina Symposium on Artificial Intelligence and Advanced Computing Technology, Raleigh, NC, March 26–27, 1992.

McCaffrey, Daniel F., Stephen Ellner, A. Ronald Gallant, and Douglas W. Nychka "Estimating the Lyapunov Exponent of a Chaotic System with Nonparametric Regression," Invited paper, Econometric Society, 1993 Allied Social Science Association Meetings, Anaheim, January 1993. Invited paper, American Mathematical Association Annual Meetings, San Antonio, January 1993.

Bansal, Ravi, A. Ronald Gallant, Robert Hussey, and George Tauchen. "Nonparametric Estimation of Structural Models for High-Frequency Currency Market Data," Contributed paper, North American Summer Meetings of the Econometric Society, Boston, June 1993.

Gallant, A. Ronald, and George Tauchen. "Which Moments to Match," Contributed paper, North American Summer Meetings of the Econometric Society, Boston, June 1993.

Gallant, A. Ronald. "Truncation Estimators," NSF Summer 1993 Program on Semi- and Nonparametric Estimation, Berkeley, California, August 1993.

Fenton, Victor M, and A. Ronald Gallant. "Convergence Rates of SNP Density Estimators," NSF-NBER Conference on Empirical Applications of Semi- and Non-Parametric Methods," Northwestern University, Evanston IL, October 1993. Triangle Econometrics Conference, Chapel Hill, December 1993.

Fenton, Victor M, and A. Ronald Gallant. "Convergence Rates of SNP Density Estimators: Monte Carlo Results," Conference on Asymmetries and Nonlinearities in Dynamic Economic Models, Madrid, January 1994.

Gallant, A. Ronald, and George E. Tauchen. “Estimation of Stochastic Volatility Models with Suggestive Diagnostics,” Conference on Multivariate Time Series and Financial Econometrics, San Diego CA, April 1994. Invited paper, XIII Latin American Meetings of the Econometric Society, Caracas, Venezuela, August 1994.

Barnett, William A., A. Ronald Gallant, Melvin J. Hinich, Jochen A. Jungeilges, Daniel T. Kaplan, and Mark J. Jensen. “A Single-Blind Controlled Competition Among Tests for Nonlinearity and Chaos,” Nonparametric and Dynamic Modeling, Fifth Meeting of the European Conference Series in Quantitative Economics and Econometrics, Berlin, Germany, December 1994. Triangle Econometrics Conference, Research Triangle Park, NC, December 1994.

Gallant, A. Ronald. “Fitting Models from Science to Data,” 4^a Escola de Modelos de Regressao, Aguas de Sao Pedro, SP, Brazil, February 1995. Invited address, XX Simposio de Analisis Economico, Barcalona, Spain, December 1995.

Gallant, A. Ronald. “The Use and Evaluation of Calibration Methods,” Panel Discussant, Invited Symposium, Seventh World Congress of the Econometric Society, Keio University, Tokyo, Japan, 22-29 August 1995.

Gallant, A. Ronald and George Tauchen. “Estimation of Continuous Time Models for Stock Returns and Interest Rates,” Conference on Computation and Estimation in Finance and Economics, Washington University at St. Louis, St. Louis, Missouri, September 15–16, 1995.

Gallant, A. Ronald and George Tauchen. “SNP: Nonparametric Time Series Analysis,” Invited paper, XX Simposio de Analisis Economico, Barcalona, Spain, December 1995.

Gallant, A. Ronald and Jonathan R. Long. “Estimating Stochastic Differential Equations Efficiently by Minimum Chi-Square,” Triangle Econometrics Conference, Research Triangle Park, NC, December 1995. Modern Statistical Methods of Time Series Analysis and Their Applications to Analysis of Economic Data,“ College Station, Texas, March 23–24, 1996.

Gallant, A. Ronald. “History of Nonlinear Econometrics,” Invited address, 50th Anniversary of The Instituto Tecnologico Autonomo de Mexico, Mexico City, Mexico, May 1996.

Gallant, A. Ronald. “Inference Using Efficient Method of Moments with Application to Stochastic Differential Equations,” Econometrics in Tel Aviv 1996, The Eitan Berglas School of Economics, Tel Aviv University, Tel Aviv, Israel, June 10–19, 1996.

Gallant, A. Ronald. “Nonlinear Statistical Models: From the Seminal Work to the Present Day,” Econometrics in Tel Aviv 1996, The Eitan Berglas School of Economics, Tel Aviv University, Tel Aviv, Israel, June 10–19, 1996. Triangle Econometrics Conference, Research Triangle Park, NC, December, 1996.

Gallant, A. Ronald. “Efficient Method of Moments with Application to Stochastic Differential Equations,” Jacob Marschak Lecture, Econometric Society Australasian Meeting, Perth, Australia, July 10–12, 1996.

Gallant, A. Ronald, and George Tauchen. “Reprojecting Partially Observed Systems with Applications to Interest Rate Diffusions,” Conference on Time Series Analysis of High Frequency Financial Data, University of California at San Diego, April, 1997. Invited paper, 50th Anniversary Conference of the Department of Statistics at Iowa State University, Ames Iowa, October 16–18, 1997. Invited paper, NSF/NBER Time Series Conference, Duke University, Durham NC, October 10–11, 1997.

Gallant, A. Ronald, and George Tauchen. “The Relative Efficiency of Method of Moments Estimators,” Triangle Econometrics Conference, Research Triangle Park, NC, December 12, 1997. Invited paper, Econometric Society, 1997 Allied Social Science Association Meetings, Chicago, January 2–5, 1998. Invited paper, 1998 Taipei International Statistical Symposium, Taipei, Taiwan, R.O.C., August 15–17, 1998. Invited paper, Econometrics and Financial Time Series Workshop, Newton Institute, Cambridge University, Cambridge, UK, October, 1998. Brazilian Statistical Association, Sixth Regression Models Symposium, Brazilia, Brazil, February, 1999.

Gallant, A. Ronald. "Simulated Method of Moments Estimators," Brazilian Statistical Association, Sixth Regression Models Symposium, Brazilia, Brazil, February, 1999.

Gallant, A. Ronald, and Halbert White, Finite Lag Estimation of Non-Markovian Processes" Cowles Foundation Conference Series: New Developments in Time Series Econometrics," Yale University, October 23–24, 1999.

Ahn, Dong-Hyun, Robert F. Dittmar, and A. Ronald Gallant, "The Extended SAINTS Model of the Term Structure of Interest Rates: Theory and Evidence," Hotelling Triangle Econometrics Conference, Research Triangle Park, NC, December, 1999.

Gallant, A. Ronald, and George Tauchen, "Efficient Method of Moments and its Use in Financial Econometrics," Invited paper, 5th World Congress of the Bernoulli Society for Mathematical Statistics and Probability and 63rd Annual Meeting of the Institute of Mathematical Statistics, May 15–20, 2000, Guanajuato, Mexico.

Ahn, Dong-Hyun, Robert F. Dittmar, A. Ronald Gallant, and Bin Gao, "Hybrid Term Structure Models," Conference on Risk Neutral and Objective Probability Distributions, Fuqua School of Business, Duke University, October 20–21, 2000.

Ahn, Dong-Hyun, Robert F. Dittmar, and A. Ronald Gallant, "Quadratic Term Structure Models: Theory and Evidence," Keynote address, Quantitative Methods in Finance and Bernoulli Society 2000 Conference, Sydney, Australia, December 5–8, 2000. Sixty First Annual Meeting, American Finance Association, New Orleans LA, January 5–7, 2001.

Gallant, A. Ronald, "Wayne Fuller's Contributions to the Use of Statistics in Economics," Invited paper, Conference in Celebration of Wayne A. Fuller's 70th Birthday, Ames, Iowa, June 21–22, 2001.

Gallant, A. Ronald, "Lectures on Nonlinear Econometrics," Sponsored by Seoul National University, Korea Advanced Institute of Science and Technology (KAIST), Yonsei University, and Korea University, Seoul, Korea, July 2–20, 2001.

Gallant, A. Ronald, "New Models, New Estimators, New Computers," Income Securities and Risk Management Workshop, Korea Stock Exchange, July 12, 2001

Chernov, Mikhail, A. Ronald Gallant, Eric Ghysels,and George Tauchen, "Alternative Models for Stock Price Dynamics," Invited paper,Workshop on Mathematical and Quantitative Finance, Sponsored by Combinatorial and Computational Mathematics Center, Pohang University of Science and Technology, Pohang Korea, held at TEMF Hotel, Kyongju, Korea, July 15–18, 2001. Colloque CIREQ-CIRANO-MITACS Conference: Univariate and Multivariate Models for Asset Pricing, University of Montreal, Montreal, Canada, May 3–4, 2002. NBER Summer Institute, Boston, July 15–19, 2002. NSF/NBER Time Series Conference, University of Pennsylvania, September 27–28, 2002.

Gallant, A. Ronald, and George Tauchen, "Efficient Method of Moments," Invited paper, XVIII Latin American Meetings of the Econometric Society, Universidad de San Andres, Buenos Aires, Argentina, July 26–28, 2001.

Gallant, A. Ronald, and George Tauchen, "Efficient Estimation of the Parameters of a Stochastic Differential Equation with Possibly Unobserved States," Invited paper, American Statistical Association, Annual Meeting, Atlanta, Georgia, August 2001.

Durham, Garland B., and A. Ronald Gallant, "Numerical Techniques for Simulated Maximum Likelihood Estimation of Stochastic Differential Equations," NBER Summer Institute, Boston, July 18–22, 2001. *JBES* invited paper, American Statistical Association, Annual Meeting, Atlanta, Georgia, August 2001.

Gallant, A. Ronald, and George Tauchen, "Simulated Score Methods and Indirect Inference for Continuous-time Models," Handbook of Financial Econometrics Conference, Princeton University, November 30 – December 1, 2001

Gallant, A. Ronald, "Effective Calibration," Colloque CIREQ-CIRANO-MITACS: Conference on Univariate and Multivariate Models for Asset Pricing, University of Montreal, Montreal, Canada, May 3–4, 2002. Clarence E. Tow Conference on Computational Economics, Henry B. Tippie College of Business, University of Iowa, Iowa City, Iowa, June 1–2, 2002.

Gallant, A. Ronald, and Robert E. McCulloch, "On the Determination of General Scientific Models," Colloque CIREQ-CIRANO-MITACS: Conference on Monte Carlo and Numerical Methods in Finance, CIRANO, Montreal, Canada, April 4, 2003; 23rd International Symposium on Forecasting, Merida, Yucatan, June 15–18, 2003; Workshop on Statistical Models for Financial Markets, University of Uppsala, Uppsala, Sweden, October 15, 2003; Workshop on Econometric Time Series, Johannes Kepler University, Linz, Austria, September 29 – October 1, 2003; Invited paper, Workshop on Econometric Modeling, University of Munich and Munich University of Technology, Munich, August 1, 2006.

Gallant, A. Ronald, "Discussion of the JBES Invited Paper, On the Fit of New-Keynseian Models," by Marco Del Negro, Frank Schorfheide, Frank 1GSmets, and Raf Wouters. American Statistical Association, Annual Meeting, Seattle WA, August 6–10, 2006.

Bansal, Ravi, A. Ronald Gallant, and George Tauchen, "Rational Pessimism, Rational Exuberance, and Markets for Macro Risks," 4th Empirical Finance Conference, Financial Markets Group, London School of Economics, London, UK, April 30 – May 2, 2003. Colloque CIREQ-CIRANO-MITACS: Conference on Financial Econometrics, Montreal, Canada, May 9–10, 2003. Econometric and Social Research Council Econometric Study Group Annual Conference, Bristol, UK, July 10–12, 2003.

Gallant, A. Ronald, "Model Calibration by Matching to the Empirical Distribution Function," Invited paper, American Statistical Association, Annual Meeting, San Francisco, California, August 2003.

Gallant, A. Ronald, "Why? Discussion of Rob Engle's Models of Dynamics Uncertainty," Statistics Day, University of Maryland, College Park, Maryland, April 15, 2005.

Gallant, A. Ronald, and Han Hong, "A Statistical Inquiry into the Plausibility of Recursive Utility," Invited Panel Discussion, The North American Summer Meetings of the Econometric Society, Minneapolis, Minnesota, June 22 – June 25, 2006. Invited paper, XXVI European Meeting of Statisticians, Torun, Poland, July 24–29, 2006. CIREQ Time Series Conference, Montreal, QC, Canada, December 8 – 9, 2006. Imperial College Financial Econometrics Conference, London, May 18 – 19, 2007.

Gallant, A. Ronald, "Discussion of Multivariate Realized Kernels," by Ole Barndorff-Nielsen, Peter Hansen, Asger Lunde, and Neil Shephard. Imperial College Financial Econometrics Conference, London, May 16 – 17, 2008.

Gallant, A. Ronald, Discussion of "High and Low Frequency Correlations in Global Equity Markets," by Robert Engle and Jose Gonzalo Rangel: Conference on Volatilities and Correlations in Stressed Markets, New York University, Stern School of Business, New York, April 3, 2009.

Gallant, A. Ronald, Discussion of "News and its Impact on Volatility Forecasts before and during the Financial Crisis," by Xilong Chen and Eric Ghysels Conference on Volatilities and Correlations in Stressed Markets, New York University, Stern School of Business, New York, April 3, 2009.

Aldrich, Eric, and A. Ronald Gallant, "Habit, Long Run Risk, Prospect? A Statistical Inquiry" Stanford Institute for Theoretical Economics, Segment 3: Econometric Analysis of High-Frequency Data and the Impact of Economic News, Stanford University, Stanford CA, June 27 – 28. Econometrics, Time Series Analysis, and Systems Theory – A Conference in Honor of Manfred Deistler, Institute for Advanced Studies, Vienna, Austria, June 18–20, 2009. Methods and Applications of DSGE Models, Federal Reserve Bank of Philadelphia and NBER, Philadelphia, October 9 – 10, 2009 "Quantitative Methods in Finance A Bayesian Perspective," The University of Texas, McCombs School of Business, December 4, 2009 First French Econometrics Conference, Celebrating Alain Monfort's Contribution to Econometrics, Toulouse School of Economics, Toulouse, France, December 14 – 15, 2009; 2009 (EC)2-meeting: Real Time Econometrics, CREATES, School of Economics and Management, Aarhus University, Aarhus Denmark, 18-19 December 2009

Gallant, A. Ronald, Han Hong, and Ahmed Khwaja, "Bayesian Estimation of a Dynamic Game with Endogenous, Partially Observed, Serially Correlated State," Conference in Honor of Halbert L. White, Jr., Causality, Prediction, and Specification Analysis: Recent Advances and Future Directions, University of California at San Diego, May 6 – 7, 2011. Nonlinear and Financial Econometrics Conference, A Tribute to A. Ronald Gallant, Toulouse School of Economics, May 19 – 21, 2011. Triangle Econometrics Conference, Research Triangle Park, December 2011. Invited paper, Bierens Festschrift Conference, The Pennsylvania State University, University Park PA, April 27, 2012. Invited paper, NBER-NSF, The Econometrics of Dynamic Games, A CEME Conference, NYU Stern School of Business, New York, August 10 – 11, 2012.

Gallant, A. Ronald, "Parallization Strategies: Hardware and Software (Two Decades of Personal Experience)," Invited paper, conference on "Massively Parallel Computing in Economics," Econometric Institute, Erasmus University, Rotterdam, and Econometrics Department, VU University, Amsterdam, May 11, 2012.

Gallant, A. Ronald, Raffaella Giacomini, and Giuseppe Ragusa "Generalized Method of Moments with Latent Variables," Invited paper, Frontiers of Macroeconomics, University College London, London UK, April 25–26, 2013. Invited paper, CIREQ Econometrics Conference: Time Series and Financial Econometrics, Montreal, QC, Canada, May 3–4, 2013. Invited paper, Barcelona GSE Summer Forum, Time Series Analysis in Macro and Finance, Barcelona, Spain, June 10–11, 2013. 2013 NBER-NSF Time Series Conference, Board of Governors, Federal Reserve, Washington DC, September 26–27, 2013. Workshop on Methods and Applications for Dynamic Stochastic General Equilibrium Models, Federal Reserve Bank of Philadelphia, Philadelphia PA, October 11–12, 2013.

Gallant, A. Ronald, and George Tauchen, "Using EMM to Estimate the Dominant Blumenthal-Getoor Index of an Ito Semimartingale," Invited paper, Conference on Indirect Estimation Methods in Finance and Economics, Abbey Hegne, Allensbach, Lake Constance, Germany, May 30–31, 2014. Invited paper, Measuring and Modeling Financial Risk with High Frequency Data, European University Institute, Florence, Italy, June 19–21, 2014.

Gallant, A. Ronald. Panelist on the "Past, Present, and Future of Indirect Estimation Methods," at the Conference on Indirect Estimation Methods in Finance and Economics, Abbey Hegne, Allensbach, Lake Constance, Germany, May 30–31, 2014.

Gallant, A. Ronald, "Reflections on the Probability Space Induced by Moment Conditions with Implications for Bayesian Inference," Invited paper, 6th French Econometrics Conference, Celebrating Christian Gourieroux's Contribution to Econometrics, Paris, December 4–5, 2014. Implications for Bayesian Inference," Invited plenary session paper, 8th Annual SoFiE Pre-Conference, Aarhus, Denmark, June 23–26, 2015. Invited paper, Rene Garcia's 65th Anniversary Conference, CIRANO, Montreal, Quebec, Canada, August 16, 2015.

Gallant, A. Ronald, Raffaella Giacomini, and Giuseppe Ragusa, "Bayesian Estimation of State Space Models Using Moment Conditions," Financial Econometrics Conference, Toulouse School of Economics, May 22–23, 2015. Contributed paper, 11th World Congress of the Econometric Society, Montreal, Quebec, Canada, August 17–21, 2015.

Gallant, A. Ronald, "Discussion of Nonparametric Tail Risk and Stock Returns: Predictability and Risk Premia by Caio Almedia, Kym Ardison, Rene Garcia, and Jose Vicente Osmani," Financial Econometrics Conference, Toulouse School of Economics, May 22–23, 2015.

Gallant, A. Ronald, "Complementary Bayesian Method of Moments Strategies," Invited paper, New Developments in Measuring and Forecasting Financial Volatility, Duke University, Durham, NC, September 16–17, 2016.

Gallant, A. Ronald, and George Tauchen, "Bayesian Inference Using the EMM Objective Function: With Application to the Dominant Generalized Blumenthal-Getoor Index of an Ito Semimartingale," 10th Annual SOFIE Conference, NYU Stern, New York, NY, June 20–23, 2017. NBER Summer Institute, Boston, MA, July 11–15, 2017.

Gallant, A. Ronald, Mohammad R. Jahan-Parvar, and Hening Liu "Does Smooth Ambiguity Matter for Asset Pricing?" 53rd Annual Conference of the Western Finance Association, Hotel Del Coronodo, Coronado, CA., June 17–20, 2018.

Gallant, A. Ronald, and George Tauchen, "Cash Flows Discounted Using a Model Free SDF Extracted under a Yield Curve Prior," Econometric Conference on Big Data and AI in Honor of Ronald Gallant Tsinghua University, Beijing, China, December 21, 2018. Financial Econometrics Conference, Toulouse, May 17–81, 2019.

Gallant, A. Ronald, "Complementary Bayesian Method of Moments Strategies," George Tauchen 70th Birthday Conference, Duke University, Durham, NC, November 15–16, 2019.

Gallant, A. Ronald, "Nonparametric Bayes Subject to Overidentified Moment Conditions," Contributed paper, 12th World Congress of the Econometric Society, Virtual confernce, August 17–21, 2020.

Gallant, A. Ronald, "Variance-Covariance from a Metropolis Chain on a Curved, Singular Manifold," Penn State – Cornell Conference on Econometrics and IO, October 15, 2021.

SOFTWARE

TSCSREG, A SAS Procedure for regression analysis on data with a time series and cross sectional structure. Available in the SAS ETS Product. With Douglas Drummond, 1974, 1993.

SNP, A Program for Nonparametric Time Series Analysis. In the public domain and available at http://www.aronaldg.org. With George Tauchen, 1991. Revised to use BEKK variance matrix 2004. Both serial and parallel, in C++, 2004.

libscl, A statistical computing library in C++ that includes a matrix class, optimizers, quantile regression, etc. In the public domain and available at http://www.aronaldg.org. Early version called libcpp, 1990; renamed to avoid a name clash with a Microsoft library and revised, 2006. Option to use cblas added 2007. Udated continously.

Nlmdl, A C++ implementation of the statistical methods in Gallant, A. Ronald (1987), "Nonlinear Statistical Models", Wiley, using libcpp. In the public domain and installed on the statlib Carnegie-Mellon email server and comp.sources.misc on usenet (uunet.uu.net), 1991.

Nlmix, A Program for Maximum Likelihood Estimation of the Nonlinear Mixed Effects Model with a Smooth Random Effects Density. In the public domain and installed on the statlib Carnegie-Mellon email server. With Marie Davidian, 1992.

EMM, A Program for Efficient Method of Moments Estimation. In the public domain and available at http://www.aronaldg.org. With George Tauchen, 1993. Revised to use MCMC methods in 2004. Both serial and parallel, in C++, 2004.

EDF, A Program for Calibrating Structural Models by Matching Empirical Distribution Functions, 2001.

GSM, Bayesian Estimation of General Statistical Models. With Robert E. McCulloch. In the public domain and available at http://www.aronaldg.org. Both serial and parallel, in C++, 2005.

MLE, Maximum Likelihood Estimation by MCMC. In the public domain and available at http://www.aronaldg.org. Both serial and parallel, in C++, 2013.

NPB, Nonparametric Bayes Subject to Overidentified Moment Conditions. In the public domain and available at http://www.aronaldg.org. In C++, 2020.

DISSERTATIONS SUPERVISED

Joao G. da Silva, 1975, "The Analysis of Cross-Sectional Time Series Data."

Sonia Balet-Lawrence, 1975, "Estimation of the Parameters in an Implicit Model by Minimizing the Sum of Absolute Values of Order p."

Geraldo da Silva e Souza, 1980, "Statistical Inference in Nonlinear Models: a Pseudo Likelihood Approach."

Jose Francisco Burguete, 1981, "Asymptotic Theory of Instrumental Variables in Nonlinear Regression."

Victor Aguirre-Torres, 1982, "Testing Non-nested Multivariate Nonlinear Regression Models with and without Specification of the Error Distribution."

Ibrahim Elbadawi, 1983, "Semi-nonparametric Estimation of Consumer Demand Systems."

Brian James Eastwood, 1987, "Confidence Interval Construction in Semi-nonparametric Regression Estimation."

Russell Dean Wolfinger, 1989, "Rates of Convergence and Asymptotic Normality in Semi-nonparametric Regression."

Daniel Francis McCaffrey, 1991, "Estimating Lyapunov Exponents with Nonparametric Regression and Convergence Rates for Feedforward Single Hidden Layer Networks."

Victor M. Fenton, 1992, "Rates of Convergence of Hermite Expansion Density Estimators."

Jonathan Robert Long, 1995, "Efficient Generalized Method of Moments Estimation of Structural Models."

Alan Philip Ker, 1996, "Rating and Yield Predicting Procedures for the Group Risk Federal Crop Insurance Program: A Nonparametric Approach."

Sarbashis Ghosh, 1997, "Implications of Intertemporally Dependent Asset Pricing Models for Macro Time Series Data."

Garland Bennett Durham, 2001, "Likelihood-Based Estimation of Continuous-Time Diffusion Models with Application to Finance," University of Iowa.

Ai-ru Cheng, 2004, "Essays on Financial Economics." University of California, Santa Cruz.

Yuriy Kitsul, 2005, "Essays in Financial Econometrics," Georgia State University.

Mohammad R. Jahan-Parvar, 2006, "Essays in Financial Econometrics," East Carolina University.

Hao Chen, 2011, "Structural Estimation Using Sequential Monte Carlo Methods," SAS Institute.

Eric Mark Aldrich, 2011, "Computation in Macroeconomic Asset Pricing," University of California, Santa Cruz.

Karina Vanesa Otero, 2015, "On Econometrics with Flexible Assumptions for Asset Pricitn and Discrete Choice Mmodels," Deloitte LLP, Los Angeles

Shengbo Zhu, 2020, "Essays on Financial Economics and Econometrics," School of Business, Renmin University of China

Na Jiang, 2022, "Essays on Macroeconomics and Financial Eeconometrics," Wells Fargo, Charlotte, NC.

GRANTS AND CONTRACTS

Statistical Reporting Service, U. S. Department of Agriculture, Cooperative Research Agreement No. 12-18-04-8-1491-X. "Crop Discrimination by Means of Statistical Analysis of Digitized Aerial Photographs," 1972. (Co-investigator with T. M. Gerig), $4,000.

Statistical Reporting Service, U. S. Department of Agriculture, Cooperative Research Agreement No. 12-18-04-8-1812. "Crop Discrimination by Means of Statistical Analysis of Digitized Aerial Photographs," 1974. (Co-investigator with T. M. Gerig), $2,000.

North Carolina Agricultural Experiment Station Project No. NC03414. “A Statistical Package for Combining Cross Section with Time Series Data,” 1974.

North Carolina Agricultural Experiment Station Project No. NC13538. “An Economic Analysis of the Demand for and Supply of Veterinarians in the U. S.,” 1976. (Co-investigator with L. A. Ihnen)

U. S. Office of Naval Research Grant No. N00014-78-G-0014. “Computer Science and Statistics: Eleventh Annual Symposium on the Interface,” 1978. (Co-investigator with T. M. Gerig), $9,000.

U. S. Army Research Office Contract No. DAAG29-78-M-0083. “Computer Science and Statistics: Eleventh Annual Symposium on the Interface,” 1978. (Co-investigator with T. M. Gerig), $5,000.

National Science Foundation Grant No. MCS-7728307. “Computer Science and Statistics: Eleventh Annual Symposium on the Interface,” 1978. (Co-investigator with T. M. Gerig), $4,500.

National Institutes of Health Contract No. 263-MD-850683. “Computer Science and Statistics: Eleventh Annual Symposium on the Interface,” 1978. (Co-investigator with T. M. Gerig), $5,000.

North Carolina Agricultural Experiment Station Project No. NC03641. “Statistical Methods for Continuous Time Demand Systems with Application to Electricity Pricing,” 1979.

Research Triangle Institute, Subcontract supporting Department of Energy Contract No. CR-04-80220-00. “Comprehensive Technical, Economics and Engineering Analysis of Data from FEA’s Electrical Utility Rate Demonstration Project in Support of Utility Conservation Programs and Policies,” 1978, $6,000.

National Science Foundation Grant No. SES 80-14239. “Instrumental Variables Estimators for Nonlinear Models,” 1980, $60,220.

National Science Foundation Grant No. SES 82-07362. “Nonlinear Regression with Infinitely Many Parameters,” 1982, $46,184.

National Science Foundation Grant No. DMS 84-04511. “Acquisition of Mathe-matical Sciences Research Equipment,” (Co-investigator with John F. Monahan et. al.) 1984, $45,000

North Carolina Agricultural Experiment Station Project No. NC03879. “Seminonparametric Demand Analysis,” 1984.

National Science Foundation Grant No. SES 85-07829. “Seminonparametric and Finite Dimensional Nonlinear Econometric Inference,” 1985, $88,610.

North Carolina Agricultural Experiment Station Project No. NC05593. “Confidence Procedures for Seminonparametric Methods,” 1985.

National Science Foundation Grant No. SES 8808015. “Toward Accurate Inference in Nonlinear Econometrics,” 1988, $134,875.

North Carolina Agricultural Experiment Station Project No. NC06134. “Nonlinear Dynamic Models,” 1989.

National Science Foundation Grant No. SES 9111867. “Toward Accurate Inference in Nonlinear Dynamic Models,” 1991, $159,866.

National Science Foundation Grant No. SBR 9514198. “Efficient Method of Moments Estimation with Application to Stochastic Differential Equations,” 1996, $169,909.

National Science Foundation Grant No. SES 0000176. “Extensions and Applications of Efficient Method of Moments,” 2000, $234,404.

National Science Foundation Grant No. SES 0000176. “Extensions and Applications of Efficient Method of Moments,” 2000, $234,404.

National Science Foundation Grant No. SES 0438174. " Computationally Intensive Strategies for Structural Modeling," 2005. $247,062.

SEMINARS

"Statistical Inference for Nonlinear Regression Models"
Iowa State University, Ames, 1971.
American Telephone and Telegraph Company, New York City, 1971.
Arizona State University, Tempe, 1971.
Texas A & M University, College Station, 1971.
University of Rhode Island, Providence, 1971.

"Seemingly Unrelated Nonlinear Regressions"
North Carolina State University, Raleigh, 1973.
University of Southern Illinois, Carbondale, 1974.

"Nonlinear Regression with Autoregressive Errors"
University of Chicago, Chicago, 1975.

"Confidence Intervals for the Parameters of a Nonlinear Model"
University of Chicago, Chicago, 1975.

"Nonlinear Regression Methods"
University of Illinois, Champaign-Urbana, 1976.
Bell Laboratories, Holmdel, New Jersey, 1977.
Institut National de la Statistique et des Etudes Economique, Paris, France, 1978.

"Explicit Estimators for Nonlinear Models"
State University of New York at Buffalo, 1978.
Universite d'Aix/Marseille III, Aix-en-Provence, France, 1978.
John Hopkins University, Baltimore, Maryland, 1978.
North Carolina State University, Raleigh, 1978.

"Statistical Inference for a System of Simultaneous, Nonlinear, Implicit Equations in the Context of Instrumental Variables Estimation"
Princeton University, Princeton, New Jersey, 1978.
Harvard University, Cambridge, Massachusetts, 1978.
Universite d'Aix/Marseille III, Aix-en-Provence, France, 1978.

"Large Sample Inference for Nonlinear Regression Models"
Universidad Nacional Autonoma de Mexico, Mexico City, 1981.

"On the Bias in Flexible Functional Forms and an Essentially Unbiased Form"
Triangle Econometrics Workshop, Research Triangle Park, NC, 1979.
North Carolina State University, Raleigh, 1980.
Harvard University, Cambridge, Massachusetts, 1981.
Colegio de Postgraduados, Chapingo, Mexico, 1981.

"Is the Theory of Demand in Agreement with the Facts"
Atlanta Chapter of the American Statistical Association, 1980.
Atlanta University, Atlanta, Georgia, 1980.
Kennesaw College, Atlanta, Georgia, 1980.
Oglethorpe College, Atlanta, Georgia, 1980.
Agnes Scott College, Atlanta, Georgia, 1980.
Elizabeth City State College, Elizabeth City, NC, 1982.

"An Overview of Linear and Nonlinear Two Stage Least Squares"
Empresa Brasileira de Pesquisa Agropecuaria, Brasilia, Brazil, 1981.

"Unbiased Determination of Production Technologies"
Cornell University, Ithaca, New York, 1981.
University of Chicago, Chicago, Illinois, 1981.
University of Southern California, Los Angeles, California, 1981.
University of California at Los Angeles, 1981.
University of California at San Diego, 1981.
Institut National de la Statistique et des Etudes Economique, Paris, 1982.
University of Texas, Austin, Texas, 1983.
Northwestern University, Evanston, Illinois, 1983.
Texas A&M University, College Station, Texas, 1983.
University of Illinois, Champaign-Urbana, Illinois, 1983.
Carnegie-Mellon University, Pittsburgh, Pennsylvania, 1983.

"A Unified Asymptotic Theory of Nonlinear Statistical Models" "
Stanford University, Stanford, California, 1982.
North Carolina State University, Raleigh, 1982.
Iowa State University, Ames, Iowa, 1982.
Northwestern University, Evanston, Illinois, 1982.
University of Chicago, Chicago, Illinois, 1982.
London School of Economics, London, England, 1984.

"Empirical Determination of the Optimal Time-of-Day Price of Electricity: A Continuous Time Model with a Demand Charge"
University of Chicago, Chicago, Illinois, 1983.
Northwestern University, Evanston, Illinois, 1983.
Bell Laboratories, Murray Hill, New Jersey, 1983.

"On Choosing Between Two Nonlinear Models Estimated Robustly"
University of Alberta, Edmonton, Alberta, Canada, 1982.
University of Wisconsin, Madison, Wisconsin, 1982.
University of Chicago, Chicago, Illinois, 1982.
Travenol Laboratories, Round Lake, Illinois, 1983.
Texas A&M University, College Station, Texas, 1983.

"Consistency in Semi-Nonparametric Regression"
Princeton University, Princeton, New Jersey, 1984.
Yale University, New Haven, Connecticut, 1984.
Cornell University, Ithaca, New York, 1984.
University of Toronto, Toronto, Ontario, Canada, 1984.
Northwestern University, Evanston, Illinois, 1985.

"Explicitly Infinite Dimensional Bayesian Analysis of Production Technologies"
McMaster University, Hamilton, Ontario, Canada, 1984.

"Semi-Nonparametric Maximum Likelihood Estimation"
University of Chicago, Chicago, Illinois, 1985.
Harvard University, Cambridge, Massachusetts, 1986.
Virginia Polytechnic Institute & State University, Blacksburg, VA, 1986.
Triangle Econometrics Workshop, Research Triangle Park, NC, 1986.
Universidad Nacional Autonoma de Mexico, Mexico City, 1986.

"Nonlinear Simultaneous Equations Methods"
Universidad Nacional Autonoma de Mexico, Mexico City, 1986.

"Seminonparametric Estimation of Conditionally Constrained Heterogeneous Processes: Asset Pricing Applications"
North Carolina State University, 1987.

University of California, San Diego, 1987.
University of Iowa, Iowa City, 1987.
Harvard University, Cambridge, Massachusetts, 1987.
Cornell University, Ithaca, New York, 1987.
Rochester University, Rochester, New York, 1987.
Purdue University, West Lafayette, Indiana, 1988.
University of Illinois, Champaign-Urbana, Illinois, 1988.

"Adaptive Truncation Rules for Seminonparametric Estimators That Achieve Asymptotic Normality"
University of Montreal, Montreal, Quebec, 1987.
University of Chicago, Chicago, Illinois, 1988.
Northwestern University, Evanston, Illinois, 1988.
University of Wisconsin, Madison, Wisconsin, 1988.
Duke University, Durham, North Carolina, 1989.

"On Fitting a Recalcitrant Series: The Pound/Dollar Exchange Rate, 1974-83"
University of Chicago, Chicago, Illinois, 1988.
North Carolina State University, Raleigh, North Carolina, 1988.
Columbia University, New York, New York, 1988.
University of Toronto, Toronto, Ontario, Canada, 1988.
Queen's University, Kingston, Ontario, Canada, 1988.
Statistics Canada, Ottowa, Ontario, Canada, 1988.
University of Washington, Seattle, Washington, 1988.

"Using Conditional Moments of Asset Payoffs to Infer the Volatility of Intertemporal Marginal Rates of Substitution"
North Carolina State University, Raleigh, North Carolina, 1989.
Iowa State University, Ames, Iowa, 1989.
University of Georgia, Athens, Georgia, 1989.
University of Virginia, Charlottesville, Virginia, 1990.

"Stock Prices and Volume"
Dalhousie University, Halifax, Nova Scotia, Canada, 1990.

"On Asymptotic Normality of Fourier Flexible Form Estimates"
University of Chicago, Chicago, Illinois, 1990.

"A Nonparametric Approach to Nonlinear Time Series Analysis: Estimation and Simulation"
University of Virginia, Charlottesville, Virginia, 1990.
North Carolina State University, Raleigh, North Carolina, 1990.

"Nonlinear Dynamic Structures"
University of North Carolina, Chapel Hill, 1991.
Bellcore, Morristown, New Jersey, May 1991.

"Estimating Lyapunov Exponents with Nonparametric Regression"
University of Chicago, Chicago, Illinois, May 1991.
Washington University in St. Louis, St. Louis, Missouri, May 1991.
Southern Methodist University, Dallas, Texas, January 1992.
Guelph University, Guelph, Ontario, Canada, January 1992.

"On Learning the Derivatives of an Unknown Mapping with Multilayer Feedforward Networks"
Windsor University, Windsor, Ontario, Canada, January 1992.

"The Nonlinear Mixed Effects Model with a Smooth Random Effects Density"
University of Chicago, Chicago, Illinois, May 1992.
Federal Drug Administration, Rockville, Maryland, July 1992.
Cornell University, Ithaca, New York, September 1992.

"Nonparametric Estimation of Structural Models for High-Frequency Currency Market Data"
University of Pennsylvania, Philadelphia, Pennsylvania, October 1992.
Rochester University, Rochester, New York, November 1992.
Wayne State University, Detroit Michigan, March 1993.

"Which Moments to Match"
University of North Carolina, Chapel Hill, December 1992.
Boston University, Boston, Massachusetts, January 1993.

"Some Advances in Statistics that Relate to Dynamic Models"
University of Michigan, Physics Department, Ann Arbor, March 1993.

"Detecting Nonlinearity and Chaos in Epidemic Data,"
University of North Carolina, Chapel Hill, February 1994.

"Convergence Rates of SNP Density Estimators"
University of North Carolina, Chapel Hill, January 1994.
Cornell University, Ithaca, New York, February 1995.

"Estimation of Stochastic Volatility Models with Suggestive Diagnostics"
Board of Governors, Federal Reserve System, Washington DC, June 1994.
University of Limburg, Maastricht, The Netherlands, June 1994.
University of Tilburg, Tilburg, The Netherlands, June 1994.

"Estimating Stochastic Differential Equations Efficiently by Minimum Chi-Square"
University of North Carolina, Chapel Hill, April 1995.
Pennsylvania State University, University Park, Pennsylvania, September 1995.
University of Southern California, Los Angeles, September 1995.
University of Florida, Gainsville FL, 1995.
Universitat Autonoma de Barcelona, Barcelona, Spain, December 1995.
University of California, San Diego, February, 1996.
University of California, Los Angeles, February, 1996.
University of California, Santa Barbara, February, 1996.
University of Arizona, Tucson, Arizona, March, 1996.

"Efficient Method of Moments Estimation with Application to the Estimation of Continuous Time Models of Interest Rates"
University of Chicago, April, 1996.
University of Monash, Melbourne, Australia, July, 1996.
University of New South Wales, Sydney, Australia, July, 1996.
Australian National University, Canberra, Australia, July, 1996.
University of California, San Diego, April, 1997.

"Fitting Models from Science to Data,"
Instituto Tecnologico Autonomo de Mexico, Mexico City, June 1995.

"Reprojecting Partially Observed Systems with Application to Interest Rate Diffusions"
University of North Carolina, Chapel Hill NC, October 1996.
Carnegie-Mellon University, Pittsburgh, Pennsylvania, March, 1997.
North Carolina State University, Raleigh NC, December 5, 1997.

"The Relative Efficiency of Method of Moments Estimators,"
University of Illinois, Champaign-Urbana, April 1998.

"Calibrating Volatility Diffusions and Extracting Integrated Volatility,"
Institute of Economics, Academia Sinica, Taipei, Taiwan, R.O.C., August 14, 1998.
University of Montreal, Montreal, Quebec, September 17, 1998.
University of Virginia, Charlottesville, Virginia, September 22, 1998.

University of North Carolina, Kennan-Flagler School of Business, Chapel Hill NC, October 6, 1998.
University of North Carolina, Department of Statistics, Chapel Hill NC, October 28, 1998.
Princeton University, Princeton NJ, November 17, 1998.

"Quadratic Term Structure Models Theory and Evidence"
Princeton University, Princeton NJ, March 21, 2000.
Texas A&M University, College Station TX, September 28, 2000.
Rice University, Houston TX, September 29, 2000.

"Efficient Method of Moments"
Instituto Tecnologico Autonomo de Mexico, Mexico City, March 31, 2000.

"Alternative Models for Stock Price Dynamics"
University of Iowa, Iowa City IA, April 23, 2001.
University of North Carolina at Charlotte, Charlotte NC, April 30, 2001.

"Effective Calibration"
University of North Carolina, Chapel Hill NC, October 15, 2001.
CIRANO, Montreal, Quebec, Canada, October 19, 2001.
Northwestern University, Evanston IL, October 30, 2001.
Duke University, Durham NC, January 29, 2002.
University of Illinois, Urbana IL, February 19, 2002.

"Rational Pessimism, Rational Exuberance, and Markets for Macro Risks"
University of Southern California, Los Angeles, October 3, 2002.
University of Montreal, Montreal, Canada, April 8, 2003.

"On the Determination of General Scientific Models"
Duke University, Durham NC, May 19, 2003.
Vanderbilt University, April 14, 2004.
Duke University, Durham NC, September 2, 2004.
Beijing University, Beijing, Peoples Republic of China, October 20, 2004.
University of California, San Diego, April 26, 2005.
University of Southern California, Los Angeles, April 29, 2005.
New York University, NYC, October 24, 2005.

"Deterministic Chaos and Neural Nets"
Qingdao University, Qingdao, Peoples Republic of China, October 21, 2004.

"A Statistical Inquiry into the Plausibility of Recursive Utility,"
Economics, Financial Econometrics, Duke University, Durham NC, May 22, 2006.
Fuqua School of Business, Finance, Duke University, Durham NC, August 30, 2006.
Institute of Statistics and Decision Sciences, Duke University, Durham NC, October 20, 2006.
Georgia State University, Atlanta GA, February 22, 2007.
Stanford University, Stanford CA, April 25, 2007.
University of Iowa, Iowa City IA, August 30, 2007.

"Estimating Dynamic Games of Complete Information with an Application to the Generic Pharmaceutical Industry,"
Economics, Financial Econometrics, Duke University, Durham NC, May 5, 2008.
East Carolina University, Greenville NC, April 11, 2008.
University of Lausanne, Lausanne, Switzerland, May 8, 2008.

"Estimating a Dynamic Oligopolistic Game with Serially Correlated Unobserved Production Costs"
New York University, NYC, March 6, 2009

"Habit, Long Run Risk, Prospect? A Statistical Inquiry"
New York University, NYC, March 9, 2009.

Columbia University, NYC, April 9, 2009.
Fuqua School of Business, Duke University, Durham NC, July 22, 2009.
Department of Economics, Duke University, Durham NC, September 14, 2009.
Fuqua School of Business, Duke University, Durham NC, September 23, 2009.
Michigan State University, East Lansing, MI, September 18, 2009.
Rochester University, Rochester, NY, October 30, 2009.
University of Chicago, Chicago IL, April 14, 2010.
University of Warwick, Warwick, UK May 19, 2010.

"Dynamic Entry with Cross Product Spillovers: An Application to the Generic Drug Industry"
North Carolina State University, Raleigh NC, March 9, 2010.

"Statistical Assessment of the Uncertainty in Earth Science Models"
National Center for Atmospheric Research, Boulder Colorado, September 9, 2010.

"Bayesian Estimation of a Dynamic Game with Endogenous, Partially Observed, Serially Correlated State"
Stanford University, Stanford CA, December 1, 2010
University of California at Davis, March 14, 2011
Boston University of California, Boston MA, July 13, 2011
Board of Governors of the Federal Reserve, December 12, 2011
New York University, NYC, February 17, 2012

Sign Switching Behavior of Cross-Country Interest Rate Correlations: Theory and Evidence
Board of Governors of the Federal Reserve, December 12, 2011.

Guest Lecture on Climate Models
Stanford University, Stanford CA, March 15, 2011

GMM with Latent Variables
The Pennsylvania State University, University Park PA, January 9, 2013
Duke University, Durham NC, March 4, 2013
Yale University, New Haven CT, April 3, 2013
Northern Illinois University, DeKalb IL, September 11, 2013
University of California, Santa Cruz, March 13, 2014
The Pennsylvania State University, University Park PA, January 9, 2013
Michigan State University, East Lansing, MI, April 4, 2014
Federal Reserve Bank of Cleveland, Cleveland, OH, April 18, 2014
KOC University, Istanbul, Turkey, May 16, 2018

GMM with Latent Variables Revisited
Yale University, New Haven CT, May 7, 2014

Parallelization Strategies: Hardware and Software (Two Decades of Personal Experience)
Yale University, New Haven CT, May 5, 2014
European University Institute, Florence, Italy, June 16, 2014

Reflections on the Probability Space Induced by Moment Conditions with Implications for Bayesian Inference
University of Connecticut (Statistics), October 15, 2014
University of Illinois, Champaign-Urbana (Economics), September 27, 2015
University of Pennsylvania (Economics), October 5, 2015
Penn State University (Statistics), October 8, 2015

Bayesian Estimation of State Space Models Using Moment Conditions
New York University (Economics), March 1, 2016

Bayesian Inference using the EMM Objective Function: With Application to the Dominant Generalized Blumenthal-Getoor Index of an Itô Semimartingale

Stanford University (Management Science & Engineering), September 29, 2016
University of North Carolina, Chapel Hill (Economics), March 6, 2017
Penn State University (Statistics), September 6, 2018

A Bayesian Approach to Estimation of Dynamic Models with Small and Large Number of Heterogeneous Players and Latent Serially Correlated States
University of Pennsylvania (Economics), October 17, 2016
University of Maryland (Economics), October 24, 2016

Exact Bayesian Moment Based Inference for the Distribution of the Small-Time Movements of an Ito Semimartingale
University of Pennsylvania (Economics), October 30, 2017

Cash Flows Discounted Using a Model Free SDF Extracted under a Yield Curve Prior
Penn State University (Economics), December 5, 2018
Queen Mary University of London (Economics), May 21, 2019
King's College London (Business School), May 22, 2019
New York University (Economics), October 29, 2019

Nonparametric Bayes Subject to Overidentified Momden Conditions
Penn State University (Economics), March 18, 2020. Virtual presentation.