

CURRICULUM VITAE RICHARD A. ASHLEY

March 19, 2025

PERSONAL DATA

Birthdate: January 31, 1950
Birthplace: Chicago, Illinois

CONTACT INFORMATION

Department of Economics (0316)
Virginia Polytechnic Institute and State University
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EDUCATION

<u>Date</u>	<u>Place</u>	<u>Major Field</u>	<u>Degree</u>
1971	California Institute of Technology	Biology	B.S.
1972	University of California, San Diego	Chemistry	M.S.
1976	University of California, San Diego	Economics	Ph.D.

PROFESSIONAL EXPERIENCE

2001 - Present Full Professor, Department of Economics, Virginia Polytechnic Institute and State University

1985 - 2001 Associate Professor, Department of Economics, Virginia Polytechnic Institute and State University

1981 - 1985 Assistant Professor, Department of Economics, Virginia Polytechnic Institute and State University

1977 - 1981 Assistant Professor, Department of Economics, University of Texas at Austin

RESEARCH SUPPORT

- 2017 Parent-child behavioral and physiological synchrony: Foundation for children's developing self-regulation. Institute for Society, Culture and Environment (ISCE), co-PI with M. A. Bell, A. Scarpa, Cynthia Smith, and J. Dunsmore. \$30,000.
- 2015 Physiological Linkage: A New Construct for Studying Social Reciprocity in Autism. Institute for Society, Culture and Environment (ISCE), with A. Scarpa (PI), M. A. Bell, J. Dunsmore, and J. Waldron, \$30,000.
- 1998-1999 Measuring and Improving the Accuracy with Which Land is Assessed. Lincoln Institute of Land Policy, R. Ashley (PI), N. Tideman and F. Plassman (Co-PI), \$10,000.
- 1990-1992 A Statistical Inference Engine For Small, Dependent Samples (With Applications to Post Sample Testing. National Science Foundation (#SES-8922394), R. Ashley (PI), \$43,792.
- 1987 The Economic Impact of the Lodging Industry -- Estimation of Output Multipliers at the SMSA Level. American Hotel & Motel Association, R. Ashley (PI), and M. Olsen of the Virginia Tech Center for Hospitality Research & Services (Co-PI).
- 1989 Tourism Marketing Study for the City of Norfolk, Virginia. Norfolk Convention and Visitor Center, R. Ashley (PI), and M. Olsen of the Virginia Tech Center for Hospitality Research & Services (Co-PI).

TEACHING GRANTS

- 1997 Principles of Economics CyberCore Course Development Proposal. Center for Innovations in Learning, Virginia Polytechnic Institute and State University, \$15,321, R. A. Ashley, R. Gilles and D. M. Patterson, Principal Investigators.
- 1997 Semi-Synchronous Distance Learning and ECON 2115. College of Arts & Sciences Course Enhancement Grant, Virginia Polytechnic Institute and State University, \$8958, R. A. Ashley, R. Gilles and R. J. Verbrugge, Principal Investigators.
- 1993 The Implementation of Microcomputer-Based Presentation Methods in the Macroeconomic Principles Course." A Summer Fellowship Grant of the Learning Resources Center, Virginia Polytechnic Institute and State University, \$10550, R. A. Ashley, Principal Investigator.

REVIEW ACTIVITIES

Associate Editor, *Econometrics*

Associate Editor, *International Journal of Data Analysis Techniques and Strategies*

Associate Editor, *Evaluation Review* (1983,1984)

Grant proposals reviewed for NSF.

Manuscripts reviewed for *Econometrica*, *American Economic Review*, *International Economic Review*, *Journal of the American Statistical Association*, *Journal of Econometrics*, *Journal of Business & Economic Statistics*, *Economic Inquiry*, *International Journal of Hospitality Management*, *Journal of*

Macroeconomics, Psychological Bulletin, Psychometrika, International Journal of Forecasting, Western Journal of Agricultural Economics, Studies in Nonlinear Dynamics and Econometrics, Economic Journal.

PUBLICATIONS (BOOKS)

Ashley, R. A. 2012. *Fundamentals of Applied Econometrics*. Wiley: Hoboken, New Jersey.

Patterson, D. M. and R. A. Ashley. 2000. *A Nonlinear Time Series Workshop: A Toolkit for Detecting and Identifying Nonlinear Time Series Dependence*. Kluwer Academic Publishers: Norwell, Massachusetts.

PUBLICATIONS (BOOK CHAPTERS AND ENCYCLOPEDIA ENTRY)

Ashley, R. A. and X. Sun. 2017. "Great Recession in the United States," *The American Middle Class: An Economic Encyclopedia of Progress and Poverty*, Vol. I, 187-190. Santa Barbara, CA:ABC-CLIO.

Ashley, R. and D.M. Patterson. 2013. An ARFIMA Model for Volatility Does Not Imply Long Memory. *In Nonlinear Times Series and Finance* (S. Coronado-Ramirez, et al. eds.). The University of Guadalajara Press. (In press.) url: http://ashleyr.econ.vt.edu/working_papers/ARFIMA_and_long_memory.pdf

Tan, H. and R. Ashley. 1999. On the Inherent Nonlinearity of Frequency Dependent Time Series Relationships, *In Nonlinear Time Series Analysis of Economic and Financial Data* (P. Rothman, ed.). Kluwer Academic Publishers: Norwell, 1999. p. 129-142.

Ashley, R. and D.M. Patterson. 1996. The Importance of Being Nonlinear: A Frequency Domain Approach to Nonlinear Model Identification and Estimation. *In Nonlinear Dynamics and Economics* (W.A. Barnett, Kirman, A.P., and Salmon, M., eds.). Cambridge University Press, Cambridge. p. 297-306.

Ashley, R., M. J. Hinich, and D. M. Patterson. 1990. Nonlinear Serial Dependence in Industrial Stock Returns. *In Advances in Mathematical Programming and Financial Planning 2*. (K. D. Lawrence, Guerard, J.B., and Reeves, G.R., eds.) Vol. 2. JAI Press, London. p. 163-182.

PUBLICATIONS (JOURNAL ARTICLES)

R. Ashley and Randal Verbrugge. 2025. "The Intermittent Phillips Curve: Finding a Stable (But Persistence-Dependent) Phillips Curve Model Specification." *Economic Inquiry* (In press. The early-view online version is published at: <https://doi.org/10.1111/ecin.13281>).

R. Ashley and F. Najafi. 2024. "The Ashley and Patterson (1986) Test for Serial Independence in Daily Stock Returns, Revisited." *Ann Oper Res*. <https://doi.org/10.1007/s10479-024-06355-0>

R. Ashley and C. Parmeter. 2020. "Sensitivity Analysis of OLS Multiple Regression Inference with Respect to Possible Linear Endogeneity in the Explanatory Variables, for Both Modest and for Extremely Large Samples". *Econometrics* 8 (1) 11 doi:10.3390/econometrics8010011.

https://ashleyr.econ.vt.edu/working_papers/Sensitivity_of_multiple_regression_OLS_inference_wrt_endogeneity.pdf

R. Ashley K. P. Tsang and Randal Verbrugge. 2020. "A New Look at Historical Monetary Policy and the Great Inflation through the Lens of a Persistence-Dependent Policy Rule". *Oxford Economic Papers*

Earlier working paper is at url: <https://www.clevelandfed.org/en/newsroom-and-events/publications/working-papers/2019-working-papers/wp-1814r-a-new-look-at-historical-monetary-policy-and-the-great-inflation.aspx>; this link more conveniently includes the Technical Appendix. Earlier versions of this paper were entitled "Frequency Dependence in a Real-Time Monetary Policy Rule" and "All Fluctuations Are Not Created Equal: the Differential Roles of Transitory Versus Persistent Changes in Driving Historical Monetary Policy.

Scarpa, A., R. Ashley, J. C. Waldron, Y. Zhou, D. M. Swain, Alleyne Broomell, J. C. Dunsmore, and M. A. Bell. 2019. "Marching to the beat of your own drum: Lack of cardiac linkage in Autism Spectrum Disorder" *Biological Psychology* 144, 37-45. <https://doi.org/10.1016/j.biopsycho.2019.03.001>.

Scarpa, A., R. Ashley, J. C. Waldron, Y. Zhou, D. M. Swain, J. C. Dunsmore, and M. A. Bell. 2017. "Side by Side: Modeling Dyadic Physiological Linkage in Strangers" *Emotion*, 18(5), 615-624. <http://dx.doi.org/10.1037/emo0000340>.

R. Ashley and X. Sun. 2016. "A Subset-Continuous-Updating Transformation on GMM Estimators for Dynamic Panel Data Models" *Econometrics* 4: 47; doi:10.3390/econometrics4040047
url: http://ashleyr.econ.vt.edu/working_papers/Sun_Ashley_dynamic_GMM.pdf

R. Ashley and C. Parmeter. 2015. "When is it Justifiable to Ignore Explanatory Variable Endogeneity in a Regression Model?" *Economic Letters* 137, 70-74.
url: http://ashleyr.econ.vt.edu/working_papers/Ashley_Parmeter_Credible_OLS.pdf

R. Ashley and C. Parmeter. 2015. "Sensitivity Analysis for Inference in 2SLS/GMM Estimation with Possibly-Flawed Instruments" *Empirical Economics* 49, 1153-1171 DOI 10.1007/s00181-015-0916-0.
url: http://ashleyr.econ.vt.edu/working_papers/Ashley_Parmeter_Credible_GMM.pdf

Ye, H., R. Ashley and J. Guerard. 2015. "Comparing the Effectiveness of Traditional vs. Mechanized Identification Methods in Post-Sample Forecasting for a Macroeconomic Granger Causality Analysis" *International Journal of Forecasting* 31, 488-500.
url: http://ashleyr.econ.vt.edu/working_papers/ye_ashley_guerard_postsample_granger.pdf

Ashley, R. and G. Li, 2014. "Re-Examining the Impact of Housing Wealth and Stock Wealth on Household Spending: Does Persistence in Wealth Changes Matter?" *Journal of Housing Economics* 26: 109-118.
url: http://ashleyr.econ.vt.edu/working_papers/Ashley_and_Li_consumption_frequency_dependence_of_wealth_effects.pdf

Ashley, R. and K. P Tsang. 2014. "Credible Granger-Causality Inference with Modest Sample Lengths: a Cross-Sample Validation Approach" *Econometrics* 2: 72-91.
url: http://ashleyr.econ.vt.edu/working_papers/Ashley_Tsang_Cross_Sample_Validation_Granger_Causality.pdf

Ashley, R. 2012. "On the Origins of Conditional Heteroscedasticity in Time Series" *Korean Economic Review* 28: 1-5.
url: http://ashleyr.econ.vt.edu/working_papers/origins_of_conditional_heteroscedasticity.pdf

Ashley, R. and H. Ye. 2012. "On the Granger Causality Between Median Inflation and Price Dispersion" *Applied Economics* 44, 4221-4238.
url: http://ashleyr.econ.vt.edu/working_papers/price_dispersion_causality.pdf

- Ashley, R., S. Ball and C. Eckel. 2010. "Motives for Giving: A Re-Analysis of Two Classic Public Goods Experiments" *Southern Economic Journal* 77: 15-26.
url: http://ashleyr.econ.vt.edu/working_papers/E2004_1.pdf.
- Ashley, R., and D.M. Patterson. 2010. "Apparent Long Memory in Time Series as an Artifact of a Time-Varying Mean: Considering Alternatives to the Fractionally Integrated Model." *Macroeconomic Dynamics* 14: 59-87. url: http://ashleyr.econ.vt.edu/working_papers/long_memory.pdf.
- Ashley, R., and D.M. Patterson. 2010. "A Test of the GARCH(1,1) Specification for Daily Stock Returns." *Macroeconomic Dynamics* 14: 137-144.
url: http://ashleyr.econ.vt.edu/working_papers/NLInsight_GARCH.pdf
- Ashley, R., and R. Verbrugge. 2009. "To Difference or Not to Difference: A Monte Carlo Investigation of Inference in Vector Autoregression Models." *International Journal of Data Analysis Techniques and Strategies* 1(3): 242-274. url: http://ashleyr.econ.vt.edu/working_papers/varsim.pdf.
- Ashley, R. 2009. "Assessing the Credibility of Instrumental Variables Inference with Imperfect Instruments via Sensitivity Analysis." *Journal of Applied Econometrics* 24: 325-337.
url: http://ashleyr.econ.vt.edu/working_papers/E2003_8.pdf
- Ashley, R., and R. Verbrugge. 2009. "Frequency Dependence in Regression Model Coefficients: An Alternative Approach for Modeling Nonlinear Dynamic Relationships." *Econometric Reviews* 28: 4-20.
url: http://ashleyr.econ.vt.edu/working_papers/freq_depend.pdf.
- Rusticelli, E., R. Ashley, E. B. Dagum, and D.M. Patterson. 2009. "A New Bispectral Test for Nonlinear Serial Dependence." *Econometric Reviews* 28: 279-293.
url: http://ashleyr.econ.vt.edu/working_papers/maximal_bispectral_9_05.pdf.
- Ashley, R. 2008. "Growth May Be Good for the Poor, But Decline Is Disastrous: on the Non-Robustness of the Dollar-Kraay Result." *International Review of Economics and Finance* 17: 333-338.
url: http://ashleyr.econ.vt.edu/working_papers/growthgood.pdf.
- Ashley, R., and R. Verbrugge. 2006. "Comments on 'A Critical Investigation on Detrending Procedures for Non-Linear Processes.'" *Journal of Macroeconomics* 28:192-194.
- Ashley, R., and D.M. Patterson. 2006. Evaluating the Effectiveness of State-Switching Models for U.S. Real Output" *Journal of Business and Economic Statistics* 24(3):266-77.
- Ashley, R. 2003. Statistically Significant Forecasting Improvements: How Much Out-of-Sample Data is Likely Necessary? *International Journal of Forecasting* 19:229-39.
- Altüg, S., R. Ashley, and D.M. Patterson. 1999. Are Technology Shocks Nonlinear? *Macroeconomic Dynamics* 3:506-533.
- Tan, H. and R. Ashley. 1999. Detection and Modeling of Regression Parameter Variation Across Frequencies with an Application to Testing the Permanent Income Hypothesis. *Macroeconomic Dynamics* 3:69-83.
- Ashley, R. 1998. A New Technique for Postsample Model Selection and Validation. *Journal of Economic Dynamics and Control* 22:647-665.
- Ashley, R., and D.M. Patterson. 1990. A Non-Parametric, Distribution-Free Test for Serial Independence in Stock Returns: A Comment. *Journal of Financial and Quantitative Analysis* 25:417-418.

- Ashley, R. 1990. Shrinkage Estimation with General Loss Functions: An Application of Stochastic Dominance Theory. *International Economic Review* 31:301-314.
- Ashley, R., and D.M. Patterson. 1989. Linear Versus Nonlinear Macroeconomies: A Statistical Test. *International Economic Review* 30:685-704.
- Ashley, R. 1988. On The Relative Worth of Recent Macroeconomic Forecasts. *International Journal of Forecasting* 4:363-76.
url: http://ashleyr.econ.vt.edu/working_papers/Ashley_IJF_1988_On_the_Relative_Worth_of_Recent_Macroeconomic_Forecasts.pdf
- Ashley, R., M.J. Hinich, and D.M. Patterson. 1986. A Diagnostic Test for Nonlinear Serial Dependence in Time Series Fitting Errors. *Journal of Time Series Analysis* 7:165-178.
- Ashley, R., and D. Vaughan. 1986. Measuring Measurement Error in Time Series. *Journal of Business and Economic Statistics* 4:95-104.
- Ashley, R., and D.M. Patterson. 1986. A Non-Parametric, Distribution-Free Test for Serial Independence in Stock Returns. *Journal of Financial and Quantitative Analysis* 21:221-227.
- Ashley, R., and D. Orr. 1985. Further Results on Inventories And Price Stickiness. *American Economic Review* 75:964-975.
- Ashley, R. 1985. On the Optimal Use of Suboptimal Forecasts of Explanatory Variables. *Journal of Business and Economic Statistics* 3:129-139. url: http://ashleyr.econ.vt.edu/working_papers/Ashley_JASA_1985_Optimal_Use_of_Suboptimal_Forecasts_of_Explanatory_Variables.pdf
- Ashley, R. 1984. A Simple Test for Regression Parameter Instability. *Economic Inquiry* XXII: 253-267.
url: http://ashleyr.econ.vt.edu/working_papers/stabilogram_economic_inquiry_1984.pdf.
- Ashley, R. 1983. Applications of Time Series Analysis to Texas Financial Forecasting. *Interfaces* 13:46-55.
- Ashley, R. 1983. On the Usefulness Of Macroeconomic Forecasts as Inputs to Forecasting Models. *Journal of Forecasting* 2:211-223. url: http://ashleyr.econ.vt.edu/working_papers/Ashley_JOF_1983_On_the_Usefulness_of_Macroeconomic_Forecasts_as_Inputs_to_Forecasting_Models.pdf
- Ashley, R. 1981. Inflation and the Distribution of Price Changes Across Markets. *Economic Inquiry* XIX:650-660.
- Ashley, R. 1980. Wages and Profits: A Comment. *Journal of Macroeconomics* 2:365-372.
- Ashley, R., C.W.J. Granger, and R. Schmalensee. 1980. Advertising and Aggregate Consumption: An Analysis of Causality. *Econometrica* 48:1149-1168.
- Ashley, R. 1979. Postponed Linear Approximations and Adaptive Control with Non-Quadratic Losses. *Journal of Economic Dynamics and Control* 1:347-359.
- Ashley, R. 1979. Anti-Inflation Tax Policy: An Alternative to Wage and Price Controls. *Journal of Macroeconomics* 1:417-421.
- Ashley, R. and C.W.J. Granger. 1979. Time Series Analysis of Residuals from the St. Louis Model. *Journal of Macroeconomics* 1:373-394.

Ashley, R. 1972. A Hybrid Theory of Muscle Contraction. *Journal of Theoretical Biology* 36:339-354.

INVITED PAPERS AND WORKSHOPS (selected)

Participant Koç University Workshop in Time Series Methods, Istanbul, June 11, 1998.

Participant at NSF/NBER Time Series Conferences:

- 1981 University of California, San Diego
- 1983 University of Chicago, Graduate School of Business
- 1984 University of California, Davis
- 1986 Southern Methodist University
- 1987 North Carolina State University
- 1990 University of California, San Diego
- 1991 University of Pittsburgh
- 1992 Northwestern University
- 1994 Colorado State University
- 1998 University of Chicago Business School
- 2001 North Carolina State University
- 2005 University of Heidelberg

Participant at Missouri Economic Conference:

- 2002 University of Missouri-Columbia
- 2003 University of Missouri-Columbia

Participant at Symposia on Nonlinear Dynamics and Econometrics:

- 1996 Boston
- 1998 New York
- 2000 Atlanta
- 2001 Atlanta
- 2002 Atlanta
- 2005 London
- 2007 Paris
- 2008 San Francisco
- 2009 Atlanta
- 2013 Milan
- 2014 New York

Participant at Midwest Econometrics Group Meeting:

- 1999 Iowa State University
- 2002 Ohio State University
- 2003 University of Missouri-Columbia
- 2004 Northwestern University
- 2005 Southern Illinois University
- 2006 University of Cincinnati
- 2007 St. Louis University

2008 University of Kansas
2010 Washington University
2011 University of Chicago
2014 University of Iowa
2015 St. Louis FRB
2016 University of Illinois, Urbana-Champaign
2017 Texas A & M

Participant at International Association for Applied Econometrics Annual Conference:
2019 University of Cyprus

WORKING PAPERS

“Time Domain Aliasing in Nonlinear Models (with G. Dwyer) VPI WP# E99-14, 1999.

“Identification of Coefficients in a Quadratic Moving Average Process Using the Generalized Method of Moments”
(with D. M. Patterson) url: http://ashleyr.econ.vt.edu/working_papers/GMM_MEGsubmit_June02.pdf.

“Beyond Optimal Forecasting” url: http://ashleyr.econ.vt.edu/working_papers/beyond_optimal_shrinkage.pdf.

“Mis-Specification and Frequency Dependence in a New Keynesian Phillips Curve” (with R. Verbrugge)
url: http://ashleyr.econ.vt.edu/working_papers/nkpc.pdf.

“International Evidence on the Oil Price-Macroeconomy Relationship: Does Persistence Matter?” (with K. P. Tsang) url: http://ashleyr.econ.vt.edu/working_papers/ashley_tsang_oil_price.pdf

“Persistence Dependence in Empirical Relations: The Velocity of Money” (with R. Verbrugge) Federal Reserve Bank of Cleveland, Working Paper, no. 15-30.
url: <https://www.clevelandfed.org/newsroom-and-events/publications/working-papers/2015-working-papers/wp-1530-persistence-dependence-in-empirical-relations.aspx>