Curriculum Vitae

Thomas J. Sargent

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Date of Birth

July 19, 1943

Education

University of California at Berkeley, B.A., June, 1964
Harvard University, Ph.D., March 1968.

Work Experience

January 1967 – January 1968,	Research Associate, Carnegie Institute of Technology
February 1968 – December 1969	First Lieutenant and Captain, U.S. Army. Served as Staff Member and Acting Director, Economics Division, Office of the Assistant Secretary of Defense (Systems Analysis)
January 1970 – June 1971	Associate Professor of Economics, University of Pennsylvania
September 1971 – June 1987	Associate Professor of Economics, University of Minnesota; Professor from July 1975
January 1970 – June 1973; 1979 – present	Research Associate, National Bureau of Economic Research
January 1973 – December 1973	Member, Brookings Panel on Economic Activity
September 1976 – June 1977	Ford Foundation Visiting Research Professor of Economics, University of Chicago
June, 1971 – June 1987	Advisor, Federal Reserve Bank of Minneapolis
September 1981 – June 1982	Visiting Professor of Economics, Harvard University and Research Associate, National Bureau of Economic Research
August 1985 – March 1987	Visiting Scholar, Hoover Institution, Stanford University, Stanford, California
March 1987 – present	Senior Fellow, Hoover Institution, Stanford University, Stanford, California
July 1991 – July 1998	David Rockefeller Professor of Economics, University of Chicago
July 1998 – September 2002	Donald Lucas Professor of Economics, Stanford University
September 2002 – present	William Berkley Professor of Economics, New York University
January 2015 – present	Distinguished Term Professor, Singapore Management University

Honors and Awards

University Medalist as Most Distinguished Scholar in Class of 1964, University of California – Berkeley.

Fellow of Econometric Society, 1976.

Mary Elizabeth Morgan Prize for Excellence in Economics, awarded by University of Chicago, 1979.

Fellow of National Academy of Sciences, April 1983.

Fellow of American Academy of Arts and Sciences, May 1983.

Recipient of 1996–97 Erwin Plein Nemmers Prize in Economics from Northwestern University.

Honorary doctorate, Stockholm School of Economics, 2003.

Honorary doctorate in economics, European University Institute, 2008.

Corresponding Fellow, British Academy, 2011.

National Academy of Sciences Award for Scientific Reviewing, 2011.

CME Group-MSRI Prize in Innovative Quantitative Applications, 2011.

Honorary Doctorate, University of Bern, 2011.

Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, 2011.

Honorary doctorate of sciences, University of Minnesota, 2013.

Organizational Service

American Economic Association: Executive Committee, 1986–88. Vice President, 2000-2001. President, 2007.

Econometric Society Council, 1987–1992; 1995–1999. Second Vice President, 2003. First Vice President, 2004. President, 2005.

President, Society for Economic Dynamics and Control, 1989–1992.

Books

Quantitative Economics, with John Stachurski, https://lectures.quantecon.org/

Uncertainty Within Economic Models, with Lars Peter Hansen, World Scientific Press, 2014.

Recursive Models of Dynamic Linear Economies, with Lars Peter Hansen, Princeton University Press, 2013.

Rational Expectations and Inflation, Princeton University Press, third edition, 2013. (Referred to below as *REI*).

Recursive Macroeconomic Theory, Third Edition, with Lars Ljungqvist, MIT Press, 2012.

Robustness, with Lars Peter Hansen, Princeton University Press, 2008.

The Big Problem of Small Change, with François Velde, Princeton University Press, 2002.

The Conquest of American Inflation, Princeton University Press, Princeton, N.J., 1999.

Bounded Rationality in Macroeconomics, Oxford University Press, Oxford, 1993.

Rational Expectations Econometrics (with Lars Hansen), Westview Press, Boulder, 1991.

Exercises in Dynamic Macroeconomic Theory (with Rodolfo Manuelli), Cambridge, MA: Harvard University Press, 1987.

Dynamic Macroeconomic Theory, Cambridge, MA: Harvard University Press, 1987.

Energy, Foresight and Strategy, editor. Washington: Resources for the Future, 1985.

Rational Expectations and Econometric Practice, edited with Robert E. Lucas, Jr. Minneapolis: University of Minnesota Press, 1981. (Referred to below as *REEP*).

Macroeconomic Theory, New York: Academic Press, 1979. Second edition, 1987.

Book Reviews

"Game Theory and Economic Modelling," by David Kreps. *Journal of Political Economy*, April 1992, pp. 665-672.

"Central Banking in Theory and Practice: Lionel Robbins Lectures." by Alan S. Blinder Review, *Journal of Political Economy*, April 1999, pp. 419-425.

Interviews

"An Interview with Thomas J. Sargent," *Macroeconomic Dynamics*, Vol. 9, 2005, pp. 561-583.

"An Interview with Thomas J. Sargent," *The Region*, Federal Reserve Bank of Minneapolis, September 2010.

Articles

"A Life-Cycle Model of Trans-Atlantic Employment Experiences," (with Sagiri Kitao and Lars Ljungqvist), *Review of Economic Dynamics*, 2017 vol. 25, April.

"Measuring Price-Level Uncertainty and Instability in the U.S., 1850-2012," (with Timothy Cogley), *Review of Economics and Statistics*, 2015, vol. 97(4), pages 827-838, October.

"Robert E. Lucas Jr.'s Collected Papers on Monetary Theory," *Journal of Economic Literature*, 2015, vol. 53(1), pp. 43-64, March.

"Four Types of Ignorance," (with Lars Peter Hansen), *Journal of Monetary Economics*, 2015, vol. 69(C), pp. 97-113.

"Welfare Cost of Business Cycles with Idiosyncratic Consumption Risk and a Preference for Robustness," (with Martin Ellison), *American Economic Journal Macroeconomics*, 2015, vol. 7(2), pp. 40-57, April.

"Harrod 1939," (with Lawrence E. Blume), *Economic Journal*, 2015, vol. 0(583), pp. 350-377, 03.

"Price Level Uncertainty and Instability in the United Kingdom," (with Timothy Cogley and Paolo Surico), *Journal of Economic Dynamics and Control*, 2015, vol. 52(C), pp. 1-16.

"Fiscal Discriminations in Three Wars," (with George Hall), *Journal of Monetary Economics*, Vol. 61 (2014), pp. 148–166.

"Career Length: Effects of Curvature of Earnings Profiles, Earnings Shocks, Taxes, and Social Security," (with Lars Ljungqvist), *Review of Economic Dynamics*, vol. 17(1), pages 1-20, January, 2014.

"Wealth Dynamics in a Bond Economy with Heterogeneous Beliefs," (with Timothy Cogley and Viktor Tsyrennikov), *Economic Journal*, 2015, vol. 124(575), pp. 1-30, 03.

"History-Dependent Public Policies," (with David Evans), in *Macroeconomics at the Service of Public Policy*, Thomas J. Sargent and Jouko Vilmunen, editors, Oxford University Press, 2013.

"Bayesian Model Averaging, Learning, and Model Selection," (with George W. Evans, Seppo Honkapohja, and Noah Williams), in *Macroeconomics at the Service of Public Policy*, Thomas J. Sargent and Jouko Vilmunen, editors, Oxford University Press, 2013.

"Three Types of Ambiguity," (with Lars Peter Hansen), *Journal of Monetary Economics*, Volume 59, Issue 5, July 2012, pp. 422–445.

"Small noise methods for risk-sensitive/robust economies," (with Evan W. Anderson and Lars Peter Hansen), *Journal of Economic Dynamics and Control*, vol. 36(4), 2012, pages 468-500.

"A Defense of the FOMC," (with Martin Ellison), *International Economic Review*, vol. 53(4), pages 1047-1065, November 2012.

"Market Prices of Risk with Diverse Beliefs, Learning, and Catastrophes," (with Timothy Cogley and Viktor Tsyrennikov), *American Economic Review, Papers and Proceedings*, vol. 102(3), pages 141-46, May 2012.

"Nobel Lecture: United States Then, Europe Now," *Journal of Political Economy*, vol. 120(1), February, 2012, pages 1 - 40.

"Where to Draw Lines: Stability Versus Efficiency," *Economica*, 2011, vol. 78(310), pages 197-214.

"Robustness and ambiguity in continuous time", (with Lars Peter Hansen), *Journal of Economic Theory*, volume 146, Issue 3, May 2011, pp. 1195–1223.

"Two Illustrations of the Quantity Theory of Money: Breakdowns and Revivals," *American Economic Review*, vol. 101(1), pages 109-28, February, 2011.

"A Labor Supply Elasticity Accord?" (with Lars Ljungqvist), *American Economic Review*, vol. 101(3), pages 487-91, May, 2011.

"Israel 1983: A bout of unpleasant monetarist arithmetic?" (with Joseph Zeira), *Review of Economic Dynamics*, vol. 14(3), pages 419-431, July 2011.

"Wanting Robustness in Macroeconomics," (with Lars Peter Hansen), In Benjamin M. Friedman, and Michael Woodford, editors: *Handbook of Monetary Economics, Vol. 3B*, North-Holland, 2011, pages 1097-1157.

"Alternative Monetary Policies in a Turnpike Economy," (with Rodolfo Manuell), *Macroeconomic Dynamics*, November, 2010. Vol. 14, number 5, pages 727-762.

"The Timing of Tax Collections and the Structure of Irrelevance Theorems in a Cash-In-Advance Model," (with Bruce Smith), *Macroeconomic Dynamics*, September 2010, Vol. 14, number 4, pages 585-603.

"Fragile beliefs and the price of uncertainty," (with Lars Peter Hansen), *Quantitative Economics*, 2010, Vol. 1, pages 129-162.

"Robust Hidden Markov LQG Problems", (with Lars Peter Hansen and Ricardo Mayer), *Journal of Economic Dynamics and Control*, 2010, Volume 34, pages 1951–1966.

"Inflation-Gap Persistence in the U.S," (with Timothy Cogley and Giorgio E. Primiceri), *American Economic Journal: Macroeconomics*, 2010, vol. 2:1, pages 43-69.

"How Sweden's Unemployment Became More Like Europe's, (with Lars Ljungqvist), in *Reforming the Welfare State: Recovery and Beyond in Sweden*, 2010, edited by Richard B. Freeman, Birgitta Swedenborg, and Robert H. Topel, University of Chicago Press, Chicago.

"Doubts or Variability?" (with Francisco Barillas and Lars Peter Hansen), *Journal of Economic Theory*, 2009, vol. 144(6), pages 2388-2418.

"The Conquest of South American Inflation," (with Noah Williams and Tao Zha), *Journal of Political Economy*, 2009. vol. 117(2), pages 211-256.

"Diverse Beliefs, Survival, and the Market Price of Risk," (with Timothy Cogley), *Economic Journal*, 2009, vol. 119(536), pages 354-376.

"Robustness and U.S. Monetary Policy Experimentation," (with Timothy Cogley, Riccardo Colacito, and Lars Peter Hansen), *Journal of Money, Credit and Banking*, (December, 2008), Vol. 40(8), pp. 1599-1624.

"Time Inconsistency of Robust Control?" (with Lars Peter Hansen), in *Macroeconomics in the Small and the Large*, 2008, edited by Roger Farmer, Edward Elgar, pages 124-139.

"Evolution and Intelligent Design," *American Economic Review*, March 2008, vol. 119(536), pages 354-376.

"Anticipated Utility And Rational Expectations As Approximations Of Bayesian Decision Making," (with Timothy Cogley), *International Economic Review*, (February, 2008), Vol. 49(1), pp. 185-221.

"Two Questions About European Unemployment," (with Lars Ljungqvist), *Econometrica*, Vol. 76, No. 1 (January, 2008), pp. 129.

"Taxes, benefits, and careers: Complete versus incomplete markets," (with Lars Ljungqvist), *Journal of Monetary Economics*, January 2008, Vol. 55(1), pp. 98-125.

"The Market Price of Risk and the Equity Premium: A Legacy of the Great Depression," (with Timothy Cogley), *Journal of Monetary Economics*, 2008, vol. 55(3), pp. 454-476.

"Rational Expectations," in *The New Palgrave Dictionary of Economics*, edited by Steven Durlauf and Larry Blume, 2008.

"Self-confirming equilibrium," (with In-Koo Cho) in *The New Palgrave Dictionary of Economics*, edited by Steven Durlauf and Larry Blume, 2008.

"Understanding European Unemployment with Matching and Search-Island Models," (with Lars Ljungqvist), *Journal of Monetary Economics*, vol. 54, No. 8, (November, 2007), pp. 2139–2179.

"Understanding European Unemployment with a Representative Family Model," (with Lars Ljungqvist), *Journal of Monetary Economics*, vol. 54, No. 8, (November, 2007), pp. 2180-2204.

"Recursive Robust Estimation and Control Without Commitment," (with Lars Peter Hansen), *Journal of Economic Theory*, vol. 136, 2007, pp. 1-27.

"Comment on Bansal's 'Long run risk' ", *Federal Reserve Bank of St. Louis Review*, July-August 2007 Vol. 89, No. 4, pp. 301-304.

"Politics and Efficiency of Separating Capital and Ordinary Government Budgets," (with Marco Bassetto), *Quarterly Journal of Economics*, November 2006, pp. 1167-1210.

"Benefits from U.S. Monetary Policy Experimentation in the Days of Samuelson and Solow and Lucas," (with Timothy Cogley and Ricardo Colacito), *Journal of Money, Credit, and Banking*, Vol. 39, No. 1, February, 2007, pp. 67-99.

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"Do Taxes Explain European Employment? Indivisible Labor, Human Capital, Lotteries, and Savings." (with Lars Ljungqvist). In: Acemoglu, D., Rogoff, K., Woodford, M. (Eds.), *NBER Macroeconomics Annual, 2006* MIT Press, Cambridge, MA, pp. 181224.

"Shocks and Government Beliefs: The Rise and Fall of American Inflation," (with Noah Williams and Tao Zha), *American Economics Review*, 2006, Vol. 96, No. 4, pp. 1193-1224.

"Robust Estimation and Control under Commitment," (with Lars Peter Hansen), *Journal of Economic Theory*, Vol. 124, No. 2, 2005, pp. 248–301.

" 'Certainty Equivalence' and 'Model Uncertainty' " (with Lars Peter Hansen) in *Models and Monetary Policy: Research in the Tradition of Dale Henderson, Richard Porter, and Peter Tinsley*, edited by Jon Faust, Athanasios Orphanides, and David Reifschneider, Board of Governors, Federal Reserve System, 2005.

"The Conquest of American Inflation: Learning and Robustness to Model Uncertainty," (with Timothy Cogley), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 528–563 .

"Impacts of Priors on Convergence and Escapes from Nash Inflation" (with Noah Williams), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 360-391.

"Knowing the Forecasts of Others," (with Joseph Pearlman), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 480–497.

"Drifts and Volatilities: Monetary Policies and Outcomes in the Post WWII U.S. (with Timothy Cogley), *Review of Economic Dynamics*, Vol. 8, 2005, pp. 262-302.

"Bayesian Fan Charts for U.K. Inflation: Forecasting and Sources of Uncertainty in an Evolving Monetary System," (with Timothy Cogley and Sergei Morozov), *Journal of Economic Dynamics and Control*, 2005, Vol. 29, pp. 1893–1925.

"Lotteries for consumers versus lotteries for firms," (2004) (with Lars Ljungqvist), *Frontiers in Applied General Equilibrium Modeling*, edited by Timothy J. Kehoe, T. N. Srinivasan and John Whalley. Cambridge University Press.

"European Unemployment and Turbulence Revisited in a Matching Model," (2004), (with Lars Ljungqvist), *Journal of the European Economic-Association*, April-May, 2(2-3), pp. 456-468.

"A Quartet of Semigroups for Model Specification, Robustness, Prices of Risk, and Model Detection, " (with Evan Anderson and Lars Peter Hansen), *Journal of the European Economic-Association.* March 2003; 1(1): 68-123.

"Laboratory Experiments with an Expectational Phillips Curve," (with Jasmina Arifovic), in *Procedures and Evolution in Central Banking*, edited by David Altig and Bruce Smith, 2003, Cambridge University Press.

"Comment on 'Adaptive Learning and Monetary Policy Design' by George Evans and Seppo Honkapohja", *Journal of Money, Credit, and Banking.* 2003, Part 2 Dec. 35(6): 1081-84.

"Comment on 'Policy Evaluation in Uncertain Economic Environments," by William Brock, Steven Durlauf, and Kenneth West" (2003), *Brookings Papers on Economic Activity.* (1): 308-13.

"European Unemployment: From a Worker's Perspective," (with Lars Ljungqvist), in *Knowledge, Information, and Expectations, in Modern Macroeconomics in Honor of Edmund S. Phelps*, edited by Philippe Aghion, Roman Frydman, Joseph Stiglitz, and Michael Woodford, Princeton University Press, 2003.

"Robust Control of Forward Looking Models," (2003), (with Lars Peter Hansen), *Journal of Monetary Economics*, April, 50(3): 581-604.

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"Comment on Christopher Sims's 'Fiscal Consequences for Mexico of Adopting the Dollar' ", (2001), *Journal of Money, Credit, and Banking.* Part 2 May; 33(2): pp. 617-25.

"Robust Permanent Income and Pricing with Filtering," (with Lars Peter Hansen and Neng Wang), *Macroeconomic Dynamics*, 6, pp. 40–84, February 2002.

"Escaping Nash Inflation," (with In-Koo Cho and Noah Williams), *Review of Economic Studies*, 69: 1-40, January 2002.

"Evolving Post-World War II U.S. Inflation Dynamics," (with Timothy Cogley), in *Macroeconomic Annual*, 2001, ed. Ben Bernanke and Kenneth Rogoff.

"Acknowledging Misspecification in Macroeconomic Theory," (with Lars Hansen), *Review of Economic Dynamics*, Vol. 4, No. 3, July 2001, pp. 519–535.

"Discussion of 'Can Market and Voting Institutions Generate Optimal Intergenerational Risk Sharing?', by Antonio Rangel and Richard Zeckhauser", (2001), in *Risk Aspects of Investment-Based Social Security Reform*, edited by John Campbell and Martin Feldstein for the NBER, University of Chicago Press.

"Saving and Pension Reform in General Equilibrium Models," (2001), (with Mariacristina De Nardi and Selahattin Imrohoroglu), *Oxford-Review-of-Economic-Policy.* Spring; 17(1): 20-39.

"Robust Control and Model Uncertainty," (with Lars Hansen), *American Economic Review*, Vol. 91, No. 2 (May 2001), pp. 60-66.

"An Appreciation of A. W. Phillips," (with Lars Hansen), in A. W. Phillips, *Collected Works in Contemporary Perspective*, edited by R. Leeson, Cambridge University Press, 2000.

"Robust Permanent Income and Pricing" (with Lars Hansen and Thomas Tallarini, Jr.), *Review of Economic Studies*, Vol 66, 1999, pp. 873-907.

"Optimal fiscal policy in a linear stochastic economy," (with François Velde), in Ramon Marimon and Andrew Scott, eds., *Computational Methods for the Study of Dynamic Economies*, 1999, Oxford University Press, Oxford.

"Policy Rules for Open Economies," (Discussion of Laurence Ball), in John Taylor, editor, *Monetary Policy Rules*, University of Chicago Press, 1999.

"Projected U. S. Demographics and Social Security," (with Mariacristina De Nardi and Selahattin Imrohoroglu), *Review of Economic Dynamics*, Volume 2, 1999, pp. 575–616.

"A Primer on Monetary and Fiscal Policy," *Journal of Banking and Finance*, 1999, volume 23, pp. 1463-1482.

"The Big Problem of Small Change," (with François Velde), *Journal of Money, Credit, and Banking*, May 1999, pp. 138–161.

"The European Unemployment Dilemma," (with Lars Ljungqvist), *Journal of Political Economy*, June, 1998, vol 106, n3, 514-50.

"Comment on 'Stimulating the Privatization of Social Security in General Equilibrium,' by Laurence Kotlikoff," (1998) in *Privatizing Social Security*, edited by Martin Feldstein for the NBER, University of Chicago Press.

"Taxes and Subsidies in Swedish Unemployment," (with Lars Ljungqvist), in *The welfare state in transition: Reforming the Swedish model,* : NBER Conference Report series. Chicago and London: University of Chicago Press, 1997, pp. 299-314.

"Accounting Properly for the Government's Interest Costs," (with George Hall), *Federal Reserve Bank of Chicago Economic Perspectives*. 1997, vol. 21, no. 4, 18-28.

"Two Computations to Fund Social Security," (with He Huang and Selahattin Imrohoroglu), *Macroeconomic Dynamics*, 1997, vol. 1, no. 1, 7-44.

Comment on "Stopping Inflation, Big and Small," *Journal of Money, Credit, and Banking*, Part 2 November 1997, vol. 29, no. 4, 776-77.

"Coinage, Debasements, and Gresham's Laws," (with Bruce Smith), in *Economic Theory*, August 1997, vol. 10, no. 2, 197-226.

"A Supply-Side Explanation of European Unemployment," (with Lars Ljungqvist), *Federal Reserve Bank of Chicago Economic Perspectives*. Vol. 20, Sept.-Oct., 1996, pp. 2–15.

"Expectations and the Nonneutrality of Lucas," *Journal of Monetary Economics*, vol. 37, June 1996, pp. 535–548.

"Mechanics of Forming and Estimating Dynamic Linear Economies," (with Evan Anderson, Lars P. Hansen, and Ellen McGrattan), in *Handbook of Computational Economics*, edited by John Rust, December 1995. North Holland.

"Neural Networks for Encoding and Adapting in Dynamic Economies," (with In-Koo Cho), in *Handbook of Computational Economics*, edited by John Rust, December 1995. North Holland.

"Macroeconomic Features of the French Revolution," (with François Velde), in *Journal of Political Economy*, vol. 103, June 1995, pp. 474–518.

"Discounted Linear Exponential Quadratic Gaussian Control," (with Lars P. Hansen), in *IEEE Transactions on Automatic Control*, vol.40, May 1995, pp. 968–971.

"The Swedish Unemployment Experience," (with Lars Ljungqvist), in *European Economic Review*, 39, 1995, pp. 1043–1070.

"Welfare States and Unemployment," (with Lars Ljungqvist), in *Economic Theory*, 6, 1995, pp. 143–160.

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"A Dynamic Index Model for Large Cross Sections," (with Danny Quah), in *Business Cycles, Indicators, and Forecasting*, edited by James Stock and Mark Watson for the NBER, University of Chicago Press, p. 285–309, 1993.

"Seasonality and Approximation Errors in Rational Expectations Models," (with Lars Hansen) *Journal of Econometrics*, vol. 55, 1993, pp. 21–55.

"On the Preservation of Deterministic Cycles when Some Agents Perceive them to be Random Fluctuations," (with George Evans and Seppo Honkapohja), in *Journal of Economic Dynamics and Control*, vol. 17, 1993, p. 705–721.

"The Convergence of Vector Autoregressions to Rational Expectations Equilibria," (with Albert Marcet), in *Macroeconomics: A Survey of Research Strategies*, eds. Alessandro Vercelli and Nicola Dimitri. Oxford University Press, p. 139–164, 1992.

"Observable Implications of Present Value Budget Balance," (with Lars Hansen and Will Roberts), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.

"Equilibrium with Signal Extraction from Endogenous Variables," *Journal of Economic Dynamics and Control*, 1991.

"Continuous Time Linear Models of Dynamic Economies," (with Lars Hansen and John Heaton), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.

"Two Difficulties in Interpreting Vector Autoregressions," (with L.P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.

"Identification of Continuous Time Rational Expectations Models From Discrete Time Data," (with L. P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.

"Exact Linear Rational Expectations Models: Specification and Estimation," (with L.P. Hansen), in *Rational Expectations Econometrics*, ed. by Lars Peter Hansen and Thomas J. Sargent, Westview Press, 1991.

"Money as a Medium of Exchange in an Economy With Artificially Intelligent Agents," (with Ramon Marimon, and Ellen McGrattan), in *Journal of Economic Dynamics and Control*, no. 14, 1990.

"The Analytics of German Monetary Reform", with François Velde, *Federal Reserve Bank of San Francisco Quarterly Review*, fall 1990.

"Elements of Monetary Reform," in *Monetary Policy for a Changing Financial Environment*, edited by William S. Haraf and Phillip Cagan, The AEI Press, Washington, D.C., 1990.

"Two Models of Measurements and the Investment Accelerator," *Journal of Political Economy*, 1989, vol. 97, no. 2.

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"Convergence of Least Squares Learning in Environments with Hidden State Variables and Private Information," (with Albert Marcet), *Journal of Political Economy*, vol. 97, no. 6, 1989.

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"Models of Business Cycles: A Review Essay," (with Rodolfo Manuelli), *Journal of Monetary Economics*, vol. 22, no. 3, November 1988.

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