# John W. Keating

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## FIELDS OF SPECIALIZATION:

Macroeconomics, Time Series Econometrics, Monetary Theory and Policy.

## **EDUCATION:**

PhD, Economics, Northwestern University, Evanston, Illinois;

Dissertation Title: "Monetary Policy Regimes and Macroeconomic Fluctuations"

Committee: Charles W. Calomiris, Robert J. Gordon (Chairman), Mark W. Watson.

B.S., Electrical Engineering, Purdue University, West Lafayette, Indiana.

### **EMPLOYMENT**:

Associate Professor, University of Kansas, Department of Economics: Since August 2000.

Assistant Professor, University of Kansas, Department of Economics: August 1997-July 2000.

Assistant Professor, Washington University, Department of Economics, St. Louis, MO: July 1989 to July 1997.

Assistant Professor, George Washington University, Department of Economics, Washington, DC: August 1988 to June 1989.

### OTHER PROFESSIONAL ACTIVITIES:

Associate Editor, Journal of Macroeconomics, Starting January 2016.

Associate Editor, Macroeconomic Dynamics, Since September 2015.

Visiting Scholar, Federal Reserve Bank of Kansas City, Since August 2015.

Senior Visiting Fellows, University of Birmingham (UK), Since March 2015.

Visiting Scholar, Federal Reserve Bank of St. Louis, November 1999.

Consultant, Laurence H. Meyer and Associates (now known as Macroeconomic Advisors), Clayton, MO, February 1994 to January 1996.

Visiting Scholar, Federal Reserve Bank of St. Louis, September 1991 to September 1992.

Part-time Economist, First National Bank of Chicago, Economic Forecasting Division, August 1987 to May 1988.

Research Assistant, Northwestern University: July 1986 to January 1988 for Charles W. Calomiris; June 1984 to May 1986 for Robert Eisner.

## **PUBLICATIONS IN REFEREED JOURNALS:**

"Is Sticky Price Adjustment Important for Output Fluctuations?" *Review of Keynesian Economics*, 3(3), Autumn 2015, 392–418 (with Isaac Kanyama).

"The Time Varying Effects of Permanent and Transitory Shocks to Real Output" *Macroeconomic Dynamics*, 19(3): 477-507, April 2015 (with Victor Valcarcel).

"Solving the Price Puzzle with an Alternative Indicator of Monetary Policy" *Economics Letters*, 124(2): 188-194, August 2014 (with Logan Kelly and Victor Valcarcel).

"What Do We Learn from Blanchard and Quah Decompositions of Output if Aggregate Demand May Not be Long-Run Neutral?" *Journal of Macroeconomics*, 38, Part B: 203-217, December 2013.

- "Interpreting Permanent Shocks to Output when Aggregate Demand May Not be Neutral in the Long Run" *Journal of Money Credit and Banking*, 45(4):747-756, June 2013.
- "Forecast Design in Monetary Capital Stock Measurement" *Global Journal of Economics*, Vol. 1, No. 1, June 2012 (with William A. Barnett and Unja Chae).
- "Greater Moderations" Economics Letters, 115(2): 168-171, May 2012, (with Victor Valcarcel).
- "Rethinking the Liquidity Puzzle: An Application of a New Measure of the Economic Stock of Money" *Journal of Banking and Finance*, 35:4 768–774, April 2011, (with William A. Barnett and Logan Kelly).
- "Toward a Bias Corrected Currency Equivalent Index", *Economics Letters*, 100(3): 448-451, September 2008 (with William A. Barnett and Logan Kelly).
- "The Discounted Economic Stock of Money with VAR Forecasts" *Annals of Finance*, 2: 229–258, 2006 (with William A. Barnett and Unja Chae).
- "Structural Inference with Long-Run Recursive Empirical Models," *Macroeconomic Dynamics*, 6(2): 266-283, April 2002.
- "Macroeconomic Modeling with Asymmetric Vector Autoregressions," *Journal of Macroeconomics*, 22(1): 1-28, Winter 2000.
- "The Dynamic Effects of Aggregate Demand and Supply Disturbances in the G7 Countries," *Journal of Macroeconomics*, 21(2): 263-278, Spring 1999 (with John V. Nye).
- "Permanent and Transitory Shocks in Real Output: Estimates from Nineteenth Century and Postwar Economies," *Journal of Money, Credit, and Banking, 30*: 231-251, May 1998 (with John V. Nye).
- "Intermediate Monetary Targets and Macroeconomic Fluctuations," *Applied Economics*, 28: 1313-1329, October 1996.
- "Structural Information in Recursive VAR Orderings," *Journal of Economic Dynamics and Control*, 20: 1557-1580, September/October 1996.
- "The Long-Run Relationship Between Inflation and Output in Postwar Economies," *Journal of Monetary Economics*, 36(3): 477-496, March 1995 (with James Bullard).
- "Structural Approaches to Vector Autoregressions," *Federal Reserve Bank of St. Louis Review*, September/October 1992, 37-57.
- "Identifying VAR Models under Rational Expectations," *Journal of Monetary Economics*, 25(3): 453-476, May 1990.

### **OTHER PUBLICATIONS:**

"Asymmetric Vector Autoregression," American Statistical Association, 1993 Proceedings of the Business and Economic Statistics Section, 88: 68-73.

### **REVISE AND RESUBMITS:**

"Postwar Business Cycles in Models where Money is Neutral in the Long Run" (with Taniya Ghosh and Isaac Kanyama).

#### **SUBMITTED PAPERS:**

- "A Model of Monetary Policy Shocks for Financial Crises and Normal Conditions" (with Logan Kelly, Lee Smith and Victor Valcarcel).
- "What's so Great about the Great Moderation? A Multi-Country Investigation of Time-Varying Volatilities of Output Growth and Inflation" (with Victor Valcarcel).

### **WORK IN PROGRESS:**

- "A New Interpretation of Monetary Targeting and the Monetarist Experiment" (with Lee Smith).
- "The Asymmetric Vector Autoregressive Moving Average (AVARMA) Model".
- "Monetary Aggregates or Interest Rates? The Optimal Monetary Instrument Revisited" (with Lee Smith).
- "Structurally Interpreting the Effects of Permanent Inflation Shocks when Money Growth is Endogenous".
- "Financial Shocks and the Natural Rate: A Role for Money in Taylor Rules? (with Lee Smith).
- "Time Varying Parameters in a Traditional Macro Model" (with Victor Valcarcel).
- "Financial Market Instability and McCallum Rules" (with Lee Smith).
- "A New Approach to Modeling Human Capital in a Semi-Endogenous Growth Model".
- "When do Long-Run Recursive Identification Restrictions and Wold Orderings Yield Identical Results?".
- "Accounting for Changes in Volatility of Aggregate Output" (with Victor Valcarcel).
- "Determinacy and Indeterminacy in Monetary Policy Rules with Money" (with Lee Smith).
- "Using the Taylor Rule to Identify Shocks to Monetary Policy" (Victor Valcarcel).
- "Using Parameter Instability to Test Economic Theories".
- "Testing Block Recursive Economic Theories By Looking for Structural Breaks".
- "Modeling Expectations and the Term Structure of Interest Rates" (possibly with Victor Valcarcel)
- "Does Hidden Output Matter for the Dynamic Effects of Aggregate Supply and Demand Disturbances? (with Fatih Savasan).

"Using Dynamic Restrictions to Identify Vector Autoregressions".

### **CONFERENCE PRESENTATIONS:**

American Statistical Association: August 1993, San Francisco.

Econometric Society:

2014 Summer Meetings, University of Minnesota;

2013 Australasian Meetings, Sydney Australia;

2006 Summer Meetings, University of Minnesota;

2005 Winter Meetings, Philadelphia;

2004 Summer Meetings, Providence, RI;

1997 Winter Meeting, New Orleans;

1994 Summer Meeting, Quebec;

1993 European Meeting, Uppsala;

1992 European Meeting, Brussels;

1992 Winter Meeting, New Orleans (presented 2 papers).

(EC)2 Conference: "Econometrics for Policy Analysis: After the Crisis and Beyond" December 2011, Florence, Italy.

European Economic Association Meetings: August 2013, Gothenburg, Sweden.

Financial Resilience Cluster Launch: March 2015, University of Birmingham, UK.

International Association of Applied Econometrics:

June 2015, Thesseloniki, Greece;

June 2014, London, UK.

Midwest Econometrics Group Meeting:

October 2015, Federal Reserve Bank of St. Louis;

September 2014, University of Iowa;

October 2013, Indiana University;

October 2011, University of Chicago;

October 2010, Washington University, St. Louis;

September 2009, Purdue University;

October 2007, St. Louis University;

October 2006, University of Cincinnati;

October 2004, Northwestern University;

October 2001, Kansas City Federal Reserve Bank;

October 2000, University of Chicago;

October 1999, Iowa State University;

September 1998, Indiana University,

October 1997, Michigan State University;

Midwest Macroeconomics Meetings:

November 2012, University of Colorado-Boulder;

May 2012, Notre Dame;

April 2010, Michigan State University;

May 2009, Indiana University;

May 2006, Washington University, St. Louis;

May 2004, Iowa State University;

October 1998, Indiana University;

April 1998, co-sponsored by the St. Louis Federal Reserve Bank and Macroeconomic Advisors LLC:

October 1997, Notre Dame University.

Missouri Economics Conference:

March 2009, March 2006, April 2005, April 2004, April 2002, May 2001

Recent Development in Macroeconomics: 3<sup>rd</sup> Meeting, June 2012, Mannheim Germany.

Regional Economic Associations:

2015 Missouri Valley Meeting, Kansas City;

2012 Western Meeting, San Francisco;

2011 Western Meeting, San Diego;

2010 Western Meeting, Portland;

2008 Southern Meeting, Washington;

2007 Southern Meeting, New Orleans;

2006 Midwest Meeting, Chicago;

2006 Southern Meeting, Charleston;

1995 Midwest Meeting, Cincinnati;

1992 Midwest Meeting, Chicago;

1992 Missouri Valley Meeting, St. Louis;

1991 Midwest Meeting, St. Louis;

1990 Eastern Meeting, Cincinnati;

1989 Western Meeting, Lake Tahoe;

1989 Midwest Meeting, Cincinnati;

1989 Missouri Valley Meeting, Kansas City.

Society of Economic Dynamics and Control: June 1996, Mexico City.

Society of Economic Measurement: August 2014, Chicago.

### **OTHER CONFERENCES ATTENDED:**

**Econometric Society:** 

2015 Winter Meetings, Boston;

2010 Winter Meetings, Atlanta;

2006 Winter Meetings, Boston;

2001 Winter Meetings, New Orleans;

2000 Winter Meeting, Boston;

1999 Winter Meeting, New York;

1996 Winter Meeting, San Francisco;

1995 Winter Meeting, Washington;

1989 Winter Meeting, Atlanta;

1988 Winter Meeting, New York;

1987 Winter Meeting, Chicago.

European Central Bank Workshop on "Non-Standard Monetary Policy Measures: Lessons from Recent International Experience" June 2012, Frankfurt;

Federal Reserve Bank of Kansas City's "Roundtable on Monetary Policy":

April 1997; May 1996; March 1994.

Federal Reserve System Meeting:

"Macroeconomics Conference" Federal Reserve Bank of Kansas City, May 2014.

"Central Bank Operating Procedures" Federal Reserve Bank of St Louis, June 1992;

International Symposia on Economic Theory and Econometrics: "Computation and Estimation in Finance and Economics" September 1995, St. Louis.

KU Workshop on Advanced Econometrics:

Chaired a session for the 2015 workshop;

Chaired a session for the 2014 workshop.

Midwest Economic Theory Group: Chaired a session at the Fall 2005 meetings held at the University of Kansas.

Midwest Econometrics Group Meeting:

October 2008, University of Kansas;

October 1995, Washington University, St. Louis.

National Bureau of Economic Research:

"Monetary Policy" April 1994, Boston;

"Financial Institutions and Macroeconomic Instability in Historical Perspective" December 1992, Boston:

"Exchange Rate Regimes" December 1990, Boston;

"Economic Fluctuations" May 1986, Chicago.

Royal Economic Society Conference, University of Manchester, Manchester, United Kingdom, 2015.

St. Louis Federal Reserve Bank, Annual Policy Conference:

"Debt, Financial Markets, and Monetary Policy" October 2009

"Monetary Policy Under Uncertainty" October 2007;

"Frontiers in Monetary Policy Research" October 2006;

"Monetary Policy in Theory and Practice" October 2000;

"Lessons from Financial History" October 1997;

"The Revised St. Louis Adjusted Monetary Base" March 1996;

"Price Stability and Economic Growth" October 1995;

"Channels of Monetary Policy" October 1994;

"Money Stock Measurement: History, Theory and Policy Implications" October 1993;

"Dimensions of Monetary Policy" October 1992;

"What Do We Know About Business Cycles?" October 1991;

"The 75th Anniversary of the Fed" October 1989.

University of California at Los Angeles: "Aggregation and Propagation of Cyclical Shocks" October 1996.

University of Mississippi: "Money, Measurement and Computation," April 1996.

# **SEMINAR PRESENTATIONS:**

Board of Governors of the Federal Reserve System (1988, 1997)

Federal Reserve Bank of Atlanta (2001, 2005)

Federal Reserve Bank of Chicago (1992)

Federal Reserve Bank of Kansas City (1988, 1995, 1997, 2013)

Federal Reserve Bank of New York (1988, 1996)

Federal Reserve Bank of St. Louis (1988, 1991)

University of California at Los Angeles (1998)

University of Cincinnati (1992, 2005)

University of Colorado at Denver (1997)

Emory University (2003)

George Washington University (1988, 1989)

University of Georgia (2003, 2005)

Georgia State University (2005)

University of Illinois at Chicago (1992, 1995, 1996)

Indiana University (1992, 1994, 2005)

University of Kansas (1997, 1997, 1998, 1998, 1999, 1999, 2000, 2003, 2004)

University of Kentucky (1992, 2006)

Louisiana State University (1996)

Miami University (1992, 2005)

University of Michigan (2004)

Michigan State University (2004)

University of Mississippi (2005)

University of Missouri (1997, 2006)

Northeastern University (2015)

Northwestern University (1987, 1988)

Notre Dame University (2006)

Ohio State University (1994, 2005)

University of Pittsburgh (2007)

Purdue University (1994, 2006)

Saint Louis University (1996)

University of South Alabama (2015)

Southern Illinois University at Carbondale (1992, 1995)

Southern Methodist University (1992)

Virginia Polytechnic Institute and State University (1997)

Washington University (1989, 1991, 1993, 1994, 1996)

Western Michigan University (2004)

West Virginia University (2007)

University of Wisconsin at Milwaukee (1988)

#### REFEREE EXPERIENCE:

American Economic Review

American Economist

**Applied Economics** 

Canadian Journal of Economics

**Economic Inquiry** 

**Economic Journal** 

**Economic Modeling** 

**Empirical Economics** 

International Finance

Journal of Applied Econometrics

Journal of Business and Economic Statistics

Journal of Business Cycle Analysis and Measurement

Journal of Econometrics

Journal of Economic Dynamics and Control

Journal of Economic Education

Journal of Economics

Journal of Economics and Business

Journal of International Financial Markets, Institutions & Money

Journal of International Money and Finance

Journal of Macroeconomics

Journal of Monetary Economics

Journal of Money, Credit and Banking

Journal of Productivity Analysis

Macroeconomic Dynamics

National Science Foundation

Oxford Bulletin of Economics and Statistics

Quarterly Journal of Business and Economics

Review of Economics and Statistics

Social Sciences and Humanities Research Council of Canada Southern Economics Journal St. John's University Press

### **TEACHING EXPERIENCE:**

PhD Courses: Applied Macroeconomics

Macroeconomics I Macroeconomics II

Monetary Theory and Policy Time Series Econometrics

MA Course: Survey of Macroeconomics

Undergraduate Courses: Intermediate Macroeconomics

**Economic Growth** 

Honors Intermediate Macroeconomics

Money and Banking

### UNIVERSITY AND OTHER PROFESSIONAL SERVICE:

Dissertation Chairman:

Lee Smith (2014, Economist, Federal Reserve Bank of Kansas City, Research Division)

"Housing Cycles and the Distribution of Off-Balance Sheet Assets"

Victor Valcarcel (2008, Assistant Professor, now at University of Texas-Dallas; first placement was Texas Tech University) "Essays in Macroeconomic Analysis"

Noah Mutoti (2005, Assistant Director, Central Bank of Zambia)

"Monetary Policy Transmission in Zambia"

Fatih Savasan (2002, Associate Professor, Afyon Kocapete University, Turkey)

"Does Hidden Output Matter?"

Mohamed Hassan (2002, Cairo University)

"Three Essays on Capital Flows, Banking Weakness and Real Exchange Rates in East Asia and Latin America"

Dissertation Committee Member:

Cherry Yu "TBD"

Joseph Fairchild "TBD"

Liting Su "TBD"

Taufiq Dawood "TBD"

Alexander Teney "TBD"

Soumya Bhadury "Efficacy of Monetary Policy, Exploring Newer Channels of Monetary Transmission and Exchange Rate Determination"

Saleh Alodayni "Empirical and Theoretical Dynamics of Oil Shocks on Monetary Response and Macroeconomic Aggregates Across Oil-Exporting and Oil-Importing Open Economies"

Biyan Tang "Three Essays on Nowcasting GDP and Divisia Monetary Aggregates"

Shangwen Huang "Three Essays on Financial Economics"

Huy Nguyen "Patterns and Factors of International Consumption Risk Sharing"

Neepa Gaekwad "Essays on Divisia Monetary Aggregation"

Boniface Yemba (2015) "Three Essays on Optimal Tax and Monetary Policy Rules"

Andrew Keinsley (2015) "Essays in Monetary and Fiscal Policy"

Mingming Zheng (2014) "Essays on Real Exchange Rates and Theoretical Monetary

Aggregation"

Febrio Kacaribu (2014) "Essays on Nonlinear Dynamic Stochastic General Equilibrium Models"

Ryan Mattson (2013) "Essays on Broad Monetary Aggregates for the United States"

Ryadh Alkhareif (2013) "Essays in Divisia Monetary Aggregates: Applications to the Gulf Monetary Union"

Peng Chen (2013) "Three Essays on Stock Market Dynamics"

Hajar Aghababa (2012) "Nonlinear Time Series Analysis and Chaos Structure in Energy Markets"

Taniya Ghosh (2012) "Bifurcation Analysis of Endogenous Growth Models"

Isaac Kanyama (2012) "Shifting Preferences and Time-Varying Parameters in Demand Analysis: A Monte Carlo Experiment"

Unal Eryilmaz (2011) "Bifurcation Analysis of Open Economy New Keynesian Models"

Wei Zhou (2010) "Risk Premium Analysis on Risky Monetary Assets"

Dogan Karaman (2009) "Empirical Essays on Turkish Inflation Experiment"

Mamdooh Alsahafi (2009) "Linear and Nonlinear Techniques for Estimating the Money Demand Function: The Case of Saudia Arabia"

Logan Kelly (2007) "Measuring the Stock of Money"

Evgeniya Duzhak (2007) "Bifurcation Analysis of New Keynesian Functional Structure"

Ousmane Seck (2006) "Will the Demand Specification Please Stand Up: A Monte Carlo Assessment of the Almost Ideal and the Rotterdam Demand Models"

Abdullah Alhmeed (2005) "The Impacts of External and Domestic Shocks and Fiscal Deficit Sustainability in MENA Countries"

Unja Chae (2005) "Three Essays on Macroeconomic and International Finance Issues"

Mehmet Dalkir (2005) "Essays on Synchronization of Economics Aggregates"

Brandon Dupont (2005) "Banking Mortgage Companies and the Panic of 1893"

Azucena Monroy (2004) "Good and Not so Good Brain Drain in the Presence of Unemployment and Remittances with Columbia as a Case in Point"

Othman Alwagdoni (2004) "Two Essays on the Sources of Macroeconomic Fluctuations and Fiscal Policy Sustainability in Oil-Based Economies: The Case of Saudi Arabia"

Yi Geng (2003) "Modeling and Estimation of the Natural Rate of Unemployment"

Suk Hyung "Bryan" Lee (2002) "Essays on Banking Efficiency"

Executive Advisory Committee: 2009 to 2010, 1998 to 2002.

Visiting-Speaker Seminar Organizer: 1997 to 2006.

**Recruiting Committee:** 

Member of search committee for the Oswald Professor of Econometrics

(Chairman in 2006, but then I began a Sabbatical leave)

Chairman, Junior Macroeconomist Search Committees, 2010, 2001, 2000 and 1999;

Member of 2002 Macroeconomist Recruiting Committee.

Faculty Evaluation Committee: For annual reviews of 2010, 2009, 1998 and 1997.

Chairman of the Research Subcommittee for Promotion and Tenure of Professor Shu Wu:

Organized and managed the evaluation of research and evaluated 7 submitted papers.

Member of the Research Subcommittee for Promotion and Tenure of Professor Yi Jin:

Evaluated 5 submitted papers.

Macro Qualifying Exams for Ph.D. and Masters students, all years except when on sabbatical.

Graduate Program Committee: since 2010, 1998 to 2006.

Graduate Admissions Committee, 2000 to 2001.

Sabbatical Committee, 2010, 2009, 2008, 2003, 2002, 2001.

Freshman/Sophomore (Non-Majors) Advising Committee: from Fall 1997 to Spring 2001.

## Additional Service:

Interviewed by Brian Ericsson about the US Government shutdown on "Central Standard" (a news/talk show, KCUR 89.3, Kansas City Public Radio), October 1, 2013.

Reviewed many textbooks on Macroeconomics, Money and Banking and Economic Growth

Member, Social Sciences General Research Fund Review Committee (1998-2000)

Member of the Faculty Compensation Committee; An advisory committee to the University's Executive Committee (2001-2004)

Participated in a study funded by the Sloan Foundation titled "Making the Implicit Explicit: An Approach to Assessing the Outcomes of Doctoral Education" by Barbara E. Lovitts of University of Maryland. Myself and several other Econ faculty (other meetings were held for people from other departments) were interviewed about what makes dissertations outstanding, merely acceptable or unacceptable (2003)

Survey Respondent for The 1999 National Study of Postsecondary Faculty (1999) External Examiner:

Bowling Green State University, Promotion and Tenure;

University of Texas-San Antonio, Promotion and Tenure;

University of Oklahoma, Promotion and Tenure;

University of Calgary, Sajadur Rahman's Dissertation;

University of Cincinnati, Promotion and Tenure;

University of West Virginia, Promotion and Tenure;

SUNY-Binghamton, Promotion and Tenure;

Preston University, 2005, Dissertation: "A Study of Privatisation in Pakistan with Special Reference to Banking Sector"

Emory University, 3rd Year Review;

University of Manitoba, 1999, Jalil Safaei Boroojeny's dissertation: "Financial Sources of Macroeconomic Fluctuations: An Empirical Investigation"

Dissertation Committee Member for Washington University in St. Louis:

Ben Herzon (1999) "Sectoral Interactions and the Monetary Transmission Mechanism"

Georgy Ganev (1997) "Monetary Aggregates in a Transition Economy : The Case of Bulgaria, 1991-1996"

Michael Bischof (1996) "Commercial Loan Markets and Credit Rationing : A Disequilibrium Analysis of State-Level Banking Data"

Milka Kirova (1996) "Demand for Money by Manufacturing Firms and Monetary Aggregation Under Uncertainty"

Meenakshi Pasupathy (1996) "Estimating a Financial Firm's Production Technology Under Uncertainty"

Sami Al-Suwailem (1995) "Does Venture Capital Financing Make a Difference?"

Yi Liu (1995) "Demand for Money and Aggregation of Financial Assets Under Risk Aversion"

Bruce Rayton (1995) "The CEO is Not the Only Employee of the Firm: An Empirical Investigation of Firm-Level Pay-Performance Relationships"

Haiyang Xu (1995) "Money Velocity and Asset Prices in a Monetary General Equilibrium Model"

Donald Allen (1994) "Inventory Investment Dynamics: A Heterogenous Coupling Explanation" Pin-Huang Chou (1994) "Three Essays on Econometric Analysis of Financial Models"

Darryl Getter (1994) "Credit Rejection and the Rise in U.S. Household Indebtedness During the 1980s: Evidence from the 1983 and 1989 Surveys of Consumer Finances"

Ge Zhou (1994) "A Dynamic Approach to the Supply-Side Monetary Aggregation Under Uncertainty"

- Mark Vaughan (1993) "Monetary Policy, Interest Rates and Commercial Bank Performance: Evidence from Capital Markets"
- Iacovos Ioannou (1992) "The Effects of Financial Innovation on the Microfoundations of Money Demand"
- Alejandro Villagomez (1992) "Consumption-Saving Decisions and the Interest Rate in Less Developed Countries"
- Sridhar Iyer (1991) "Learning Interest Rate Regimes: An Empirical Study of the Expectations Hypothesis of the Term Structure of Interest Rates"
- Chung-Hua Shen (1991) "Three Essays in the Econometrics of Time Series"

### **GRANTS AND AWARDS:**

General Research Fund, Summer Support, University of Kansas:

FY 2003 "Modeling Expectations and The Term Structure of Interest Rates"

FY 2000 "What are the Structural Sources of Permanent Shocks to Real Output?"

New Faculty General Research Fund, University of Kansas, FY 1999, "Using Time Series Models to Estimate Dynamic Economies"

University Facilitating Fellowship, George Washington University, 1989, "Approximating Economic Structure with VAR Models".

### SABBATICAL LEAVES

Spring 2015, University of Kansas Spring 2007, University of Kansas August 1993 to August 1994, Washington University

**REFERENCES:** available on request