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**JOHN C. CHAO**  
Department of Economics  
University of Maryland  
College Park, MD 20742  
(301) 405-1579

**Education:**

Yale University, Ph.D. in Economics, 1994  
Dissertation Title: *Essays in Bayesian Econometrics*  
Dissertation Committee: Peter C. B. Phillips (Chair), Donald Andrews, Christopher Sims

Wharton School, University of Pennsylvania, B.S., 1987  
Summa Cum Laude with Concentrations in Accounting, Finance, and Economics

**Research Interests:**

Many Instruments, Panel Data Models, Time Series Econometrics, Empirical Asset Pricing

**Awards, Fellowships, and Grants:**

Department Teaching Awards: Spring 1996, Fall 1998, Spring 2000, Fall 2004  
Royal Economic Society Travel Grant, 1997  
Graduate Research Board Summer Research Award, University of Maryland, 1996  
Yale Dissertation Fellowship, 1993-1994  
Cowles Foundation Fellowship, 1993  
Yale Graduate Fellowship, 1988-1992

**Academic Employment:**

2002-	Associate Professor of Economics, University of Maryland
1995-2002	Assistant Professor of Economics, University of Maryland
1994-1995	Assistant Professor of Economics, Pennsylvania State University

### **Visiting Posts and Affiliate Appointment:**

Faculty Member (2003 - )  
Statistics Consortium, University of Maryland

Visiting Associate Professor (December 2007 - January 2008)  
School of Economics, Shanghai University of Finance and Economics  
Guest lecturer for a graduate time series econometrics course

Visiting Associate Professor (2002-03)  
Department of Economics, Yale University

Visiting Research Associate (1999)  
Institute of Economics, Academia Sinica

### **Other Employment:**

1987-1988      Staff Auditor, Price Waterhouse

### **Professional Activities:**

Associate Editor, *Econometric Theory*, 2006 -

Member of Editorial Board, **Journal of International and Global Economic Studies**, 2007 -

Member of Editorial Board, *International Journal of Applied Economics*, 2003 -

Vice President, Chinese Economic Association in North America, 2003

Referee Services: *Econometrica*, *Econometric Reviews*, *Econometric Theory*, *Econometrics Journal*, *Economics Letters*, *Journal of Applied Econometrics*, *Journal of Business and Economic Statistics*, *Journal of Econometrics*, *Journal of Forecasting*, *Journal of Statistical Computation and Simulation*, *Journal of Money, Credit, and Banking*, *National Science Foundation*, *Oxford Bulletin of Economics and Statistics*, *Review of Economic Studies*.

### **Publications:**

Chao, J.C., N.R.Swanson, J.A.Hausman, W.K. Newey, and T.Woutersen , 2011, “Asymptotic Distribution of JIVE in a Heteroskedastic IV Regression with Many Instruments,” *Econometric Theory*, forthcoming.

Chao, J.C. and N.R.Swanson, 2009, Comments on “Weak Instrument Robust Tests in GMM and the New Keynesian Phillips Curve” by Frank Kleibergen and Sophocles Mavroeidis, *Journal of Business and Economic Statistics*, 27, 316-318.

Chao, J. C. and N. R. Swanson, 2007, "Alternative Approximations of the Bias and MSE of the IV Estimator under Weak Identification with Application in Bias Correction," *Journal of Econometrics*, 137, 515-555.

Avramov, D. And J.C. Chao, 2006, "An Exact Bayes Test of Asset Pricing Models with Application to International Markets," *Journal of Business*, 79, 293-323.

Chao, J. C. and N. R. Swanson, 2006, "Asymptotic Normality of Single-Equation Estimators for the Case with a Large Number of Weak Instruments" in: D. Corbae, S. Durlauf, and B. Hansen (eds.) *Econometric Theory and Practice: Frontiers of Analysis and Applied Research*, (New York: Cambridge University Press), 82-124.

Chao, J. C. and N. R. Swanson, 2005, "Consistent Estimation with a Large Number of Weak Instruments," *Econometrica*, 73, 1673-1692.

Avramov, D., J. C. Chao and T. Chordia, 2004, "Hedging Against Liquidity Risk and Short Sale Constraints," *The ICFAI Journal of Financial Risk Management*, 1, 19-39

Chao, J. C. and P. C. B. Phillips, 2002, "Jeffreys Prior Analysis of the Simultaneous Equations Model in the Case with  $n + 1$  Endogenous Variables," *Journal of Econometrics*, 111, 251-283.

Chao, J. C., V. Corradi and N. R. Swanson, 2001, "Out-of-Sample Tests for Granger Causality," *Macroeconomic Dynamics*, 5, 598-620.

Chao, J. C., V. Corradi and N. R. Swanson, 2001, "Data Transformation and Forecasting in Models with Unit Roots and Cointegration," *Annals of Economics and Finance*, 2, 59-76.

Chao, J. C. and N. R. Swanson, 2000, "Tests of Non-nested Hypotheses in Nonstationary Regressions with an Application to Modeling Industrial Production," *Macroeconomic Dynamics*, 4, 42-72.

Chao, J. C. and P. C. B. Phillips, 1999, "Model Selection in Partially Nonstationary Vector Autoregressive Processes with Reduced Rank Structure," *Journal of Econometrics*, 91, 227-271.

Chao, J. C. and P. C. Phillips, 1998, "Posterior Distributions in Limited Information Analysis of the Simultaneous Equations Model Using the Jeffreys Prior," *Journal of Econometrics*, 87, 49-86.

Chao, J. C. and C. Chiao, 1998, "Testing the Expectations Theory of the Term Structure of Interest Rates using Model Selection Methods," *Studies in Nonlinear Dynamics and Econometrics*, 2, 95-108.

Chao, J. C. and P. C. B. Phillips, 1996, "An Empirical Bayesian Approach to Cointegration Rank Selection and Test of the Present Value Model for Stock Prices" in: Wesley O. Johnson, Jack C. Lee, and Arnold Zellner (eds.), *Modeling and Prediction: Honoring Seymour Geisser* (New York: Springer-Verlag), 325-349.

### **Working Papers:**

“Instrumental Variable Estimation with Heteroskedasticity and Many Instruments,” (with J.A. Hausman, W.K.Newey, N.R.Swanson, and T. Woutersen), Revised and Submitted to *Quantitative Economics*, 2011.

“Testing Overidentifying Restrictions with Many Instruments and Heteroskedasticity.” (with J.A. Hausman, W.K.Newey, N.R.Swanson, and T.Woutersen), Submitted to *Journal of Econometrics*, 2011.

“Panel Structural Modeling with Weak Instrumentation and Covariance Restrictions,” Submitted to *Econometric Theory*, 2011.

“Modeling Nonstationary Initial Conditions and Analyzing Its Impacts on Dynamic Panel Estimation in Experiments,” (with M. Kim and D. Sul), Manuscript, May 2011.

“Multiple Shrinkage Estimation of the IV Regression Model with Many Weak Instruments,” (with W.K. Newey and N. R. Swanson), Manuscript, June 2007.

### **Research in Progress:**

“Hypothesis Testing in High Dimensions” (with Norman Swanson)

“Investing in Mutual Funds When Skilled Managers Are Hard to Identify” (with Doron Avramov).

### **Selected Conference Presentations:**

Econometric Society World Congress, 2010

Far Eastern Meeting of the Econometric Society, 2008

Conference in Honor of Peter C. B. Phillips at Singapore Management University, 2008

New Zealand Econometrics Study Group (NZESG) Conference Honoring Peter Phillips, 2008

Sino-Korean Econometrics Conference, 2007

Far Eastern Meeting of the Econometric Society, 2004

North American Winter Meeting of the Econometric Society, 2004

NSF-NBER Conference on Weak and/or Many Instruments, 2003

Global Finance Conference, 2002

Annual Meetings of the Chinese Economic Association in North America, 1996 and 2002

North American Summer Meeting of the Econometric Society, 2001

Econometric Society World Congress, 2000

ICSA Applied Statistics Symposium, 1999  
European Conferences of the Econometrics Community (EC<sup>2</sup>), 1997  
Meeting of the International Society for Bayesian Analysis, 1994

**Invited Seminars:**

Rutgers University - 2011  
University of Colorado - 2011  
University of Virginia - 2010, 2001  
National Tsinghua University, Taiwan - 2010  
Johns Hopkins University - 2009  
University of Texas at Dallas - 2009  
UCLA - 2007  
Temple University - 2007  
Vanderbilt University - 2007  
University of Montreal - 2006  
Academia Sinica, Taiwan - 2010, 2006, 2004, 1999  
Rice University - 2005  
Texas A&M University - 2005  
University of Toronto - 2005, 1994  
Virginia Tech - 2005  
Syracuse University - 2004  
Queen's University - 2003  
University of Pittsburgh - 2003  
Yale University - 2003  
Federal Reserve Bank of Atlanta - 2002  
North Carolina State University - 2002  
University of Illinois - 2001  
Cornell University - 2000  
SUNY-Albany - 2000  
University of California - San Diego - 2000  
University of Pennsylvania - 1997, 2000  
University of Rochester - 1994, 2000  
National Taiwan University - 1999  
Duke University, Institute of Statistics and Decision Science - 1994  
Ohio State University - 1994  
Pennsylvania State University - 1994  
Wayne State University - 1994

**Teaching:***Ph.D. Courses:*

Probability and Mathematical Statistics  
Econometrics I-III, Core Graduate Sequence  
Time Series Econometrics

*Undergraduate Courses:*

Probability and Statistics  
Econometrics I - introduction to regression analysis  
Econometrics II - more advanced topics in regression analysis

**Dissertation Committees Served**

Ahmet Aysan, Paul Bailey (*in progress*), Said Bakhache, Fabiano Bastos, Nerissa Brown (Accounting) Wen-Chun Chang, Chaoshin Chiao, Debabrata Das, Valentina Dimitrova Grajzl, Li Ding, Lili Duan (Psychology) Phillippe Heiche, Berta Heybey, David Hunter (Finance), Seth Freedman, David Givens, Tugrul Gurgur, Inanc Kirgiz, Keith Kranker, Aparna Mathur, Alin Mirestean, Deepak Mitra, Jan Mutl (co-chair), San Sampattavanjia, Oleksandr Shepotylo, Nathalie Simon, Anshuman Sinha (Finance, *in progress*). Bryce Stephens, Carl Ullrich (Finance), Qing Wang, Heng Wei, Yevgeny Yuzefovich, Ping Zhang, Lan Zhao, Wenjie Zhu (Accounting, *in progress*).