

February 2010

Jun YU

Professor of Economics, School of Economics
Deputy Director (Academic), Sim Kee Boon Institute for Financial Economics
Deputy Director, Centre for Financial Econometrics
Singapore Management University

Degrees

- Ph.D. (Economics), University of Western Ontario, 1998
- M.A. (Economics), University of Western Ontario, 1994
- B.Sc. (Mathematics), Wuhan University, 1990
- B.A. (Economics), Wuhan University, 1990

Regular Positions Held

- Professor of Economics, Singapore Management University, 2009-present
- Associate Professor of Economics, Singapore Management University, 2004-2008
- Senior Lecturer over the bar, Department of Economics, University of Auckland (tenured), 2002-2003
- Lecturer, Department of Economics, University of Auckland, 1998-2001

Visiting Positions Held

- Affiliated Researcher, Risk Management Institute, National University of Singapore, Singapore, 2008-present
- Visiting Scholar, Department of Finance, National Taiwan University, 2009
- Visiting Scholar, CREST, France, 2005
- Visiting Scholar, Hiroshima University, Japan, 2004
- Visiting Scholar, Cowles Foundation, Yale University, U.S.A., 2002
- Visiting Fellow, School of Finance and Economics, University of Technology, Sydney, Australia, 2002
- Visiting Fellow, Department of Economics, National University of Singapore, Singapore, 2001-2002

Awards

- Lee Kuan Yew Fellow for Research Excellence, Singapore Management University, 2005
- Early Career Research Excellence Award at the University of Auckland, 2002
- Marsden Award of the Royal Society of New Zealand, 2001
- The A R Bergstrom Prize in Econometrics, 1999
- T.M. Browns Ph.D. Thesis Prize at the University of Western Ontario, 1998
- Doctoral Fellowship of Social Sciences and Humanities Research Council of Canada (SSHRC), 1997
- Doctoral Scholarship of Natural Sciences and Engineering Research Council of Canada (NSERC), 1997
- Ontario Graduate Scholarship, 1997
- Sir Arthur Currie Memorial Scholarship at the University of Western Ontario, 1995
- Special University Scholarship at the University of Western Ontario, 1993-1998

- Graduate Tuition Scholarship at the University of Western Ontario, 1994-1998
- Undergraduate Fellowship, Wuhan University, 1990

Research Interests

Financial Econometrics, Econometric Theory

Publications in Refereed Journals

1. HUANG, S., YU, J., 'Bayesian Analysis of Structural Credit Risk Models with Microstructure Noises', *Journal of Economic Dynamics and Control*, forthcoming.
2. PHILLIPS, P.C.B., WU, Y., and YU, J., 'Explosive Behavior and the Nasdaq Bubble in the 1990s: When Does Irrational Exuberance Have Escalated Asset Values?' *International Economic Review*, forthcoming.
3. GOURIEROUX, C., PHILLIPS, P.C.B., YU, J., 'Indirect Inference for Dynamic Panel Models', *Journal of Econometrics*, forthcoming.
4. PHILLIPS, P.C.B., YU, J., 'Simulation-based Estimation of Contingent-claims Prices', *Review of Financial Studies*, 2009, 22, 3669-3705.
5. PHILLIPS, P.C.B. and YU, J., 'A Two-Stage Realized Volatility Approach to Estimation of Diffusion Processes with Discrete Data', *Journal of Econometrics*, 2009, 150, 139-150.
6. HUANG, S., YU, J., 'An Efficient Method for Maximum Likelihood Estimation of a Stochastic Volatility Model.' *Statistics and Its Interface*, 2008, 1, 289-296.
7. HUANG, S., YU, J., 'On Stiffness in Affine Asset Pricing Models', *Journal of Computational Finance*, 2007, 10, 99-123.
8. JIN, X., WANG, L., YU, J., 'Temporal Aggregation and Risk-Return Relation', *Finance Research Letters*, 2007, 4, 104-115.
9. HUANG, S., LIU, Q., YU, J., 'Realized Stock Index Volatility with Microstructure Noises', *Annals of Economics and Finance*, 2007, 8, 33-56.
10. ASAI, M., McALEER, M., YU, J., 'Multivariate Stochastic Volatility: A Review', *Econometric Reviews*, 2006, 25, 145-175.
11. YU, J., YANG, Z. ZHANG, X.B., 'A Class of Nonlinear Stochastic Volatility Models and Its Implications on Pricing Currency Options', *Computational Statistics and Data Analysis*, 2006, 51, 2218-2231.
12. PHILLIPS, P.C.B., YU, J., 'Realized Variance and Microstructure Noise -- Comment', *Journal of Business and Economic Statistics*, 2006, 24, 202-208.
13. YU, J., MEYER, R., 'Multivariate Stochastic Volatility Models: Bayesian Estimation and Model Comparison'. *Econometric Reviews*, 2006, 25, 361-384.
14. PHILLIPS, P.C.B., YU, J., 'Comments: A Selective Overview of Nonparametric Methods in Financial Econometrics', *Statistical Science*, 2005, 20, 338-357.

15. YU, J., 'On Leverage in a Stochastic Volatility Model', *Journal of Econometrics*, 2005, 127, 165-178.
16. PHILLIPS, P.C.B., YU, J., 'Jackknifing Bond Option Prices', *Review of Financial Studies*, 2005, 18, 707-742.
17. BERG, A., MEYER, R., YU, J., 'Deviance Information Criterion for Comparing Stochastic Volatility Models', *Journal of Business and Economic Statistics*, 2004, 22, 107-120.
18. YU, J., 'Empirical Characteristic Function Estimation and Its Applications', *Econometric Reviews*, 2004, 23, 93-123.
19. TSE, Y.K., ZHANG, X.B., YU, J., 'Estimation of Hyperbolic Diffusion using MCMC Method', *Quantitative Finance*, 2004, 4, 158-169.
20. KNIGHT, J., YU, J., 'Empirical Characteristic Function in Time Series Estimation', *Econometric Theory*, 2002, 18, 691-721.
21. KNIGHT, J., SATCHELL, S., YU, J., 'Estimation of the Stochastic Volatility Model by the Empirical Characteristic Function Method', *Australian and New Zealand Journal of Statistics*, 2002, 44, 319-335.
22. YU, J., 'Forecasting Volatility in the New Zealand Stock Market', *Applied Financial Economics*, 2002, 12, 193-202.
23. YU, J., PHILLIPS, P.C.B., 'A Gaussian Approach for Continuous Time Models of Short Term Interest Rates', *Econometrics Journal*, 2001, 4, 211-225.
24. SHAO, Q.M., YU, H., YU, J., 'Do Stock Returns Follow a Finite Variance Distribution?' *Annals of Economics and Finance*, 2001, 2, 467-486.
25. MEYER, R., YU, J., 'BUGS for a Bayesian Analysis of Stochastic Volatility Models', *Econometrics Journal*, 2000, 3, 198-215.
26. GUTHRIE, G., WRIGHT, J., YU, J., 'Testing the Expectations Theory of the Term Structure for New Zealand', *New Zealand Economic Papers*, 1999, 33, 93-114.

Publications in Edited Books or Refereed Conference Proceedings

27. YU, J., 'Simulation-based Estimation Methods for Financial Time Series Models', invited contribution to *Handbook of Computational Finance*, eds Jin-Chuan Duan, Wolfgang Härdle, and James E. Gentle, Springer, forthcoming.
28. PHILLIPS, P.C.B., YU, J. 'Maximum Likelihood and Gaussian Estimation of Continuous Time Models in Finance', in Andersen, T.G., Davis, R.A., Kreib, J.-P., Mikosch, T. (eds) *Handbook of Financial Time Series*, 2009, 497-530.
29. YU, J. and YANG, Z. 'A Class of Nonlinear Stochastic Volatility Models', *Proceedings of the 5th International Conference on Computational Intelligence in Economics and Finance*, 2006, Atlantis Press. DOI: 10.2991/jcis.2006.87.
30. BLUHM, H., YU, J., 'Forecasting Volatility: Evidence from the German Stock Market arket,' In P. Franses and M. McAleer (eds.), *Modelling and Forecasting Financial Volatility*, 2001, 173-193.

31. YU, J., 'Test for Finite Variance Stock Return Distributions', in J.L. Knight and S.E. Satchell (eds.) *Return Distributions in Finance*. Oxford, Butterworth-Heinemann, 2000, 143-164.

Working Papers

1. KLEPPE, T.S., YU, J., SKAUG, H., 'Estimating the GARCH Diffusion: Simulated Maximum Likelihood in Continuous Time'
2. PHILLIPS, P.C.B., YU, J., 'Information Loss in Volatility Measurement with Flat Price Trading.'
3. YU, J., 'A Semiparametric Stochastic Volatility Model'.
4. YU, J., 'Bias in the Estimation of the Mean Reversion Parameter in Continuous Time Models'.
5. ERIKSSON, A, PREVE, D., YU, J., 'Forecasting Realized Volatility Using a Nonnegative Semiparametric Time Series Model'.
6. SKAUG, H. and YU, J., 'Automatic Likelihood Analysis of Stochastic Volatility Models'.
7. YU, J., 'Econometric Analysis of Continuous Time Models: A Survey of Peter Phillips' Work and Some New Results'.
8. PHILLIPS, P.C.B., YU, J., 'Dating the Timeline of Financial Bubbles during the Subprime Crisis'.
9. PHILLIPS, P.C.B., YU, J., 'Limit Theory for Dating the Origination and Collapse of Mildly Explosive Periods in Time Series Data'.
10. KLEPPE, T.S., YU, J., SKAUG, H., 'Simulated Maximum Likelihood Estimation of Continuous Time Stochastic Volatility Models'.
11. ULLAH, A., WANG, Y., YU, J., 'Bias in the Mean Reversion Estimator in the Continuous Time Gaussian and Levy Processes'.
12. LI, Y., YU, J., 'A New Bayesian Unit Root Test in Stochastic Volatility Models'.
13. ZHOU, Q., YU, J., 'Asymptotic Distributions of the Least Square Estimator for Diffusion Processes'.

Research Grants

- 2007 'Econometric Analysis of Ultra-high Frequency Data', Ministry of Education, AcRF Tier-2, Singapore, \$616,400, principal co-investigator
- 2007 'Explosive Behavior in the 1990s Nasdaq,' *Singapore Management University*, principal investigator
- 2006 'Indirect Inference for Dynamic Panel Models,' *Singapore Management University*, principal investigator
- 2005 'Realized Volatility and Its Application in the Estimation of Continuous Time Models,' *Singapore Management University*, principal investigator

- 2004 ‘Towards Understanding Asymmetric Response of Volatilities,’ *Singapore Management University*, principal investigator
- 2004 ‘On Leverage in a Stochastic Volatility Model,’ *Singapore Management University*, principal investigator
- 2002 ‘Efficient Estimating and Testing Methods for Time Series Models,’ *University of Auckland*, \$30,000
- 2001 ‘Efficient Estimating and Testing Methods for Time Series Models,’ *The Royal Society of New Zealand Marsden Fund*, \$100,000, principal investigator
- 2000 ‘Gaussian Estimation of Interest Rates,’ *Auckland Business School Research Fund*, \$2,850, principal investigator
- 1999 ‘Empirical Characteristic Function in Time Series Estimation and Applications,’ *University of Auckland Research Fund*, \$10,300, principal investigator
- 1999 ‘Interest Rate Dynamics,’ *Auckland Business School Research Fund*, \$2,500, principal investigator
- 1998 ‘Automated Forecasting and Policy Analysis for the New Zealand Economy,’ *Auckland Business School Research Fund*, \$6,000, associate investigator.

Editorial Services

- Guest Editor, *Journal of Econometrics*, Special issue on “Recent Advances in Nonstationary Macro Time Series and Financial Time Series”
- Guest Editor, *Journal of Econometrics*, Special issue on “Recent Advances in Panel Data and Nonparametric and Nonlinear Models”
- Associate Editor, *Econometric Theory*, 2006-2010
- Associate Editor, *Econometric Reviews*, 2006-2008
- Member of the Editorial Board, *Empirical Economics*, 2009-2012
- Associate Editor, *Asia-Pacific Financial Markets*, 2010-2013

Refereeing

Advances in Econometrics, Annals of Statistics, Applied Financial Economics, Computational Statistics and Data Analysis, Econometric Theory, Econometrics Journal, Econometric Reviews, Finance and Stochastics, Journal of the American Statistical Association, Journal of Applied Econometrics, Journal of Business and Economic Statistics, Journal of Economic Surveys, Journal of Econometrics, Journal of Empirical Finance, Journal of Financial Econometrics, Journal of Finance, Journal of Futures Markets, Journal of Time Series Analysis, Pacific-Basin Finance Journal, Quantitative Finance, Studies in Nonlinear Dynamics and Econometrics, New Zealand Economic Papers, Review of Economic Studies, Pacific-Basin Finance Journal, Physica A, Statistica Sinica, Statistics and Its Interface, Singapore Economic Review, National Science Foundations, Social Sciences and Humanities Research Council of Canada, Taylor and Francis, Risk Management Institute, External Examiner of Theses at University of Canterbury, University of Western Ontario, and National University of Singapore

Consultancy Experience

- Consultant: ASB Bank, “Panel analysis of bank margins.” 1999
- Short course: Commercial banks, investment banks, and the Reserve Bank of New Zealand, “Volatility Forecasting.” 2000
- Short course: Treasury of New Zealand, “Economic Forecasting.” 2001
- Consultant: Covec, “Tourism forecasting review.” 2002
- East Asia Training and Consultancy Pte, “Macroeconometric and Financial Modeling with GAUSS7.0”. 2005
- National University of Singapore MFE, “Financial Econometrics”
- Short course: Government Investment Corporation, “Econometrics and Financial Econometrics”

Professional Activities

- Co-chairman, 2010 International Symposium on Econometric Theory and Applications, 2010, Singapore
- Co-founder, Singapore Econometrics Study Group, Singapore
- Co-chairman, Conference in Honor of Peter C.B. Phillips, 2008, Singapore
- Co-chairman, Singapore Econometrics Study Group Meeting, 2004, 2005, 2006, 2007, 2009, Singapore
- Co-chairman, New Zealand Econometrics Study Group Meeting, 2001, Auckland
- Co-chairman, New Zealand Econometrics Study Group Meeting, 1999, Auckland
- Member, Program Committee, Second Annual Conference of the Society for Financial Econometrics, Geneva, Switzerland, June 2009
- Member, Program Committee, Far Eastern Meeting of Econometric Society, 2008, Singapore
- Member, Scientific Program Committee, Risk Management Conference, National University of Singapore, 2008, Singapore
- Member, Scientific Program Committee, International Symposium on Financial Engineering and Risk Management, 2008, Shanghai
- Member, Program Committee, Symposium on Econometric Theory and Applications, 2008, Seoul
- Member, Program Committee, Symposium on Econometric Theory and Applications, 2007, Hong Kong
- Member, Program Committee, 2001 Econometric Society Australasian Meeting, 2001, Auckland
- Member of Econometric Society
- Member of American Finance Association
- Member of Western Finance Association

University Administrative Duties

- Deputy Director (Academic Affairs), Sim Kee Boon Institute for Financial Economics, Singapore Management University, 2009-present
- Deputy Director, Centre for Financial Econometrics, Singapore Management University, 2009-present
- Member, Recruiting Committee, 2000, 2001, 2002, 2003, 2006
- Member, Computing Committee, 2000, 2001
- Representative, EO committee
- Member, IT Committee, 2005, 2006

PhD Students and Thesis Supervision

- Andreas Berg, University of Auckland (co-supervisor), 2005
'Bayesian Analysis of Financial Time Series'

Presentations at Professional Conferences

Invited speaker, 2009 Summer Workshop in Econometric Analysis of High-Frequency Data: Financial Volatility and the Impact of Economic News, Stanford Institute for Theoretical Economics, Stanford University, "Forecasting Realized Volatility Using a Nonnegative Semiparametric Model", June 2009

Invited speaker, The 2009 Summer Workshop in Econometrics, Tsinghua University, Beijing, "Econometric identification of financial bubbles and crisis event concatenation", May 2009

Invited speaker, International Conference on High Frequency Data in Financial Markets, Hatotsubashi University, Tokyo, "Information Loss in Volatility Measurement with Flat Price Trading", October 2008

Invited speaker, International Symposium on Financial Engineering and Risk Management, Shanghai University of Finance & Economics, "Bayesian Analysis of Structural Credit Risk Models with Microstructure Noises", June 2008

Invited speaker, New Zealand Econometrics Study Group Meeting, University of Auckland, March 2008

Invited speaker, Conference on Likelihood Methods in Finance, Bendheim Center for Finance, Princeton University, "Maximum Likelihood and Gaussian Estimation of Continuous Time Models in Finance", October 2007

Invited speaker, The 14th International Conference on Panel Data, Xiamen University, "Indirect Inference for Dynamic Panel Models", July 2007

Invited speaker, Third International Symposium on Financial Engineering and Risk Management, Beijing University, "Simulation-based Estimation of Contingent-claims Prices", June 2007

Invited speaker, 2005 International Symposium on Econometrics Development, Beijing University, "On Stiffness in Affine Asset Pricing Models", April 2005

Invited speaker, Symposium on Financial Econometrics 2004, "Asymmetric Response of Volatility: Evidence from Stochastic Volatility Models and Realized Volatility", Taiwan, October 2004

Invited speaker, Workshop on Econometric Theory and Applications, "Multivariate Stochastic Volatility Models: Bayesian Estimation and Model Comparison", Taiwan, October 2004

Invited speaker, Inaugural New Zealand Time Series Workshop, "Jackknifing Bond Option Prices," Christchurch, December 2003

Singapore Econometrics Study Group Meeting, Singapore, “Bayesian Analysis of Structural Credit Risk Models with Microstructure Noises”, Singapore, August 2009

Fifth Symposium on Econometric Theory and Applications, “Explosive Behavior and the Nasdaq Bubble in the 1990s: When Does Irrational Exuberance Have Escalated Asset Values?”, Kyoto, August 2009

Society of Financial Econometrics Annual Meeting, “Forecasting Realized Volatility Using a Nonnegative Semiparametric Model”, Geneva, June 2009

Far Eastern Econometric Society Meeting, Singapore. “Forecasting Realized Volatility Using a Nonnegative Semiparametric Time Series Model”, July 2008

Conference in honor of Peter C.B. Phillips, “Biases in the Estimation of Mean Reversion Parameter in a Simple Continuous Time Model”, Singapore, July 2008

2008 China International Conference in Finance, “Simulation-based Estimation of Contingent-claims Prices”, Dalian, July 2008

Second Annual Risk Management Conference, National University of Singapore, “Bayesian Analysis of Structural Credit Risk Models with Microstructure Noises”, June 2008

Fourth Symposium on Econometric Theory and Applications, “A Semiparametric Stochastic Volatility Model”, Seoul, May 2008

Third Symposium on Econometric Theory and Applications, “Simulation-based Estimation of Contingent-claims Prices”, Hong Kong, April 2007

Singapore Econometrics Study Group Meeting, Singapore, “Simulation-based Estimation of Contingent-claims Prices”, Singapore, July 2007

Fifth International Conference on Computational Intelligence in Economics and Finance, “A Class of Nonlinear Stochastic Volatility Models,” October 2006

Far Eastern Econometric Society Meeting, Beijing, China, “Indirect Inference for Dynamic Panel Models”, July 2006

Second Symposium on Econometric Theory and Applications, Xiamen, China, “Indirect Inference for Dynamic Panel Models”, April 2006

Econometric Society North American Winter Meeting, Boston, “A Two-Stage Realized Volatility Approach to the Estimation for Diffusion Processes from Discrete Observations”, January 2006

Finance Summer Camp at Singapore Management University, “A Two-Stage Realized Volatility Approach to the Estimation for Diffusion Processes from Discrete Observations”, July 2005

Singapore Econometrics Study Group Meeting, Singapore. “On Stiffness in Affine Asset Pricing Models”, July 2005

Inaugural Symposium on Econometric Theory and Applications, Taipei, “A Two-Stage Realized Volatility Approach to the Estimation for Diffusion Processes from Discrete Observations”, May 2005

Inaugural Saw Centre Conference on Quantitative Finance, “On Stiffness in Affine Asset Pricing Models”, April 2005

New Zealand Econometrics Study Group Meeting, Auckland. “On Leverage in a Stochastic Volatility Model,” July 2004

Inaugural Singapore Econometrics Study Group Meeting, Singapore. “On Leverage in a Stochastic Volatility Model,” July 2004

2004 Far Eastern Econometric Society Meeting, Seoul, South Korea. “On Leverage in a Stochastic Volatility Model,” June 2004

Econometric Society North American Winter Meeting, San Diego. “Jackknifing Bond Option Prices,” January 2004

AEA Meeting, San Diego. “A Class of Nonlinear Stochastic Volatility Models and Its Implications on Pricing Currency Options,” January 2004

Canadian Econometrics Study Group Meeting, Hamilton, Canada. “Jackknifing Bond Option Prices,” September 2003

New Zealand Finance Colloquium, Palmerston North, New Zealand, “A Class of Nonlinear Stochastic Volatility Models and Its Implications on Pricing Currency Options,” February 2003

New Zealand Finance Colloquium, Palmerston North, New Zealand, “Jackknifing Bond Option Prices,” February 2003

Canadian Econometrics Study Group Meeting, Quebec City, Canada. “A Class of Nonlinear Stochastic Volatility Models and Its Implications on Pricing Currency Options,” October 2002

New Zealand Econometrics Study Group Meeting, Dunedin. “A Class of Nonlinear Stochastic Volatility Models,” August 2002

2002 Australiasian Econometric Society Meeting, Brisbane, Australia. “A Class of Nonlinear Stochastic Volatility Models,” July 2002

AFA Meeting, Atlanta. “A Gaussian Approach for Continuous Time Models of Short Term Interest Rates,” January 2002

International Conference on Modelling and Forecasting Financial Volatility, Perth, Australia. “Forecasting Volatility: Evidence from the German Stock Market,” September 2001

ICSA Meeting, Hong Kong. “Gaussian Estimation of Continuous Time Models of Short Term Interest Rates,” August 2001

2001 Far Eastern Econometric Society Meeting, Kobe, Japan. “Gaussian Estimation of Continuous Time Models of Short Term Interest Rates,” July 2001

2001 Australiasian Econometric Society Meeting, Auckland, New Zealand. “Forecasting Volatility: Evidence from the German Stock Market,” July 2001

New Zealand Econometrics Study Group Meeting, Auckland. "Exact Gaussian Estimation of Continuous Time Term Structure Models," March 2001

Midwest Econometric Study Group Meeting, Chicago. "Estimation of a Self-Exciting Poisson Jump Diffusion Model by the Empirical Characteristic Function Method," October 2001

New Zealand Econometrics Study Group Meeting, Wellington. "Test for Finite Variance Stock Return Distributions," March 2000

ANZIAM Meeting, Witiangi, New Zealand. "Test for Finite Variance Stock Return Distributions," February 2000

New Zealand Econometrics Study Group Meeting, Auckland. "Forecasting Volatility in the New Zealand Stock Market," July 1999

New Zealand Econometrics Study Group Meeting, Auckland. "Efficient Estimation of the Stochastic Volatility Model by the Empirical Characteristic Function Method," March 1999

1999 Far Eastern Econometric Society Meeting, Singapore. "Efficient Estimation of the Stochastic Volatility Model by the Empirical Characteristic Function Method," July 2001

Quantitative Methods in Finance, Sydney, Australia. "Do Stock Returns Follow A Finite Variance Distribution?" December 1998

Canadian Econometrics Study Group Meeting, London, Ontario. "Efficient Estimation of the Stochastic Volatility Model by the Empirical Characteristic Function Method," September 1998

Presentations at Workshops

Academia Sinica, Taiwan
Bank of Canada
City University of Hong Kong
Chinese University of Hong Kong
CREST, France
Government of Singapore Investment Corporation
Hiroshima University
Hong Kong University of Science and Technology
Hong Kong Institute for Monetary Research
Ling Tung University, Taiwan
London School of Economics
Monash University, Australia
Monetary Authority of Singapore
National Central University, Taiwan
National Taiwan University
National University of Singapore
Queen's University, Canada
Simon Fraser University, Canada
Singapore Management University
Sun Yat-Sen University, China
Tunghai University, Taiwan

University of Alberta, Canada
University of Auckland
University of Melbourne
University of Technology, Sydney
University of Toronto
University of Western Australia
University of Western Ontario
Yale University

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