CURRICULUM VITAE

CHUNG-MING KUAN

OFFICE ADDRESS

Institute of Economics
Academia Sinica
128 Academia Road, Sec. 2
Taipei 115, TAIWAN

+886 2 2782–2791 ext. 646
+886 2 2651–0647 (Direct)
+886 2 2782–2019 (Fax)

URL: www.sinica.edu.tw/~ckuan

E-mail: ckuan@econ.sinica.edu.tw

EDUCATION

M.A. (Economics), University of California, Davis, December 1984

Ph.D. (Economics), University of California, San Diego, June 1989

TEACHING FIELDS

Econometric Theory, Statistics, Time Series Analysis, Economic Forecasting

RESEARCH FIELDS

Econometric Theory and Methods (Model specification tests, Regime switching models, Quantile regression, Program evaluation)

Financial Econometrics (Realized volatility, Expectile-based VaR models)

AFFILIATIONS AND POSITIONS

University of Illinois at Urbana-Champaign, Department of Economics
Assistant Professor, August 1989–July 1995
Associate Professor with Tenure, August 1995–July 1996

National Taiwan University, Department of Economics
Professor, August 1994–July 1999
Joint appointment with Academia Sinica, August 1997–present

Academia Sinica, Institute of Economics
Research Fellow, August 1999–August 2004
Distinguished Research Fellow, September 2004–Present
Director, August 2001–August 2007
Joint appointment with National Taiwan University, August 1997–present

National Science Council of Taiwan, Social Science Research Center
Director, June 1999–August 2001

University of California at San Diego, Department of Economics
Visiting Professor, September 2005–December 2005

University of Southern California, Department of Economics
Visiting Professor, January 2008–May 2008

AWARDS AND HONORS

Excellent Teacher in Commerce, College of Commerce and Business Administration, University of Illinois, 1990, 1991, 1992.

ODE/EGSO Teaching Award, College of Commerce and Business Administration, University of Illinois, 1991 (Large Class) and 1993 (Small Class).

Distinguished Research Award (2-year term), National Science Council, Executive Yuan, Taiwan, 1994–1995, 1996–1997.

Lien Zhen-Dong Memorial Fellowship, National Taiwan University, 1996.

Outstanding Scholarship Award (5-year term), Foundation for the Advancement of Outstanding Scholarship, Taiwan, 1997–2001, 2002–2006.

NTU Teaching Award, National Taiwan University, 1999.

Academic Award, Ministry of Education, Executive Yuan, Taiwan, 1999.

Member (Academician) of Academia Sinica, Taiwan, elected 2002.

Information Science Award, Joint Conference of Information Sciences, 2006.

KEYNOTE AND INVITED SPEECHES

Annual speech, Foundation in Memory of S. C. Tsiang, Taipei, Taiwan, October 21, 2002.

Invited address, 2002 Conference on Electronic Commerce (EC 2002), National Chung Hsing University, Taiwan, December 9, 2002.

Keynote speech, 2003 Taiwan Conference on Applied Economics, Tamkang University, Taiwan, October 17, 2003.

Invited speech, Interchange Association, Japan (IAJ), Tokyo, Japan, March 25, 2004.

Nan-Qiang Lecture, Xiamen University, Xiamen, China, April 6, 2005.

Huei-Sun Lecture, National Chung-Hsin University, Taiwan, April 14, 2005.

Keynote speech, KESG (Korean Econometric Study Group) Meeting, Jeju, Korea, May 28, 2005.

President's Forum, National Cheng-Kung University, Taiwan, June 9, 2005.

Invited talk, Conference on Globalization and Economic Growth, Shanghai University of Finance and Economics, Shanghai, China, Nov. 4, 2005.

Invited talk, Annual Meeting of the Chinese Quantitative Economics Association, Hangzhou, China, May 13, 2006.

Invited talk, 9th Joint Conference of Information Sciences, Kaohsiung, Taiwan, Oct. 8, 2006.

Huang Da-R. Mundell Lecture, Renmin University, Beijing, China, Oct. 25, 2006.

Invited talk, International Workshop on Forecasting and Risk Management, Chinese Academy of Science, Beijing, China, Dec. 20, 2006.

Invited talk, Sino-Korean Econometrics Workshop 2007, Xiamen University, Xiamen, China, Dec. 13, 2007.

EDITORSHIP

Taiwan Economic Review, Associate Editor, August 1994–July 1996; Editor, August 1996–July 1998.

Academia Economic Papers, Associate Editor, September 1998–August 2000; Executive Editor, September 2000–August 2001.

Proceedings of the Annual Meeting of Taiwan Economic Association, Editor, 1999–2000.

Statistica Sinica, Associate Editor, 1999–July 2005.

Journal of Econometrics. Associate Editor, 1999–2008.

Economics Bulletin, Associate Editor, 2001–July 2005.

Studies in Nonlinear Dynamics and Econometrics. Associate Editor, 2001–Jan. 2006.

Econometric Reviews, Associate Editor, 2004–present.

Journal of Econometrics, Special issue on "Recent Development in Financial Econometrics", Guest Editor, 2005.

China Economic Quarterly, Editorial board, 2005–present.

REFEREED ARTICLES (International)

C. W. J. Granger, C.-M. Kuan, M. Mattson, and H. White, "Trends in unit energy consumption: The performance of end-use models," *Energy*, **14**, 943–960, 1989.

C.-M. Kuan and K. Hornik, "Learning in a partially hard-wired recurrent network," *Neural Network World*, **1**, 39–45, 1991.

C.-M. Kuan and K. Hornik, "Convergence of learning algorithms with constant learning rates," *IEEE Transactions on Neural Networks*, **2**, 484–489, 1991.

K. Hornik and C.-M. Kuan, "Convergence analysis of local feature extraction algorithms," *Neural Networks*, **5**, 229–240, 1992.

S. Piramuthu, C.-M. Kuan, and M. Shaw, "Learning algorithms for neural-net decision support," *ORSA Journal on Computing*, **5**, 361–373, 1993.

C.-M. Kuan and H. White, "Artificial neural networks: An econometric perspective" with reply, *Econometric Reviews*, **13**, 1–91 and 139–143, 1994.

C.-M. Kuan, K. Hornik, and H. White, "A convergence result for learning in recurrent neural networks," *Neural Computation*, **6**, 420–440, 1994.

C.-M. Kuan and M.-Y. Chen, "Implementing the fluctuation and moving-estimates tests in dynamic econometric models," *Economics Letters*, **44**, 235–239, 1994.

K. Hornik and C.-M. Kuan, "Gradient-based learning in recurrent networks," *Neural Network World*, **2/94**, 157–172, 1994.

C.-M. Kuan, "A range-CUSUM test with recursive residuals," *Economics Letters*, **45**, 309–313, 1994.

C.-M. Kuan and H. White, "Adaptive learning with nonlinear dynamics driven by dependent processes," *Econometrica*, **62**, 1087–1114, 1994.

C.-M. Kuan, "A recurrent Newton algorithm and its convergence properties," *IEEE Transactions on Neural Networks*, **6**, 779–783, 1995.

C.-M. Kuan and K. Hornik, "The generalized fluctuation test: A unifying view," *Econometric Reviews*, **14**, 135–161, 1995.

C.-S. Chu, K. Hornik, and C.-M. Kuan, "MOSUM tests for parameter constancy," *Biometrika*, **82**, 603–617, 1995.

C.-S. Chu, K. Hornik, and C.-M. Kuan, "The moving-estimates test for parameter stability," *Econometric Theory*, **11**, 669–720, 1995.

L. Nunes, C.-M. Kuan, and P. Newbold, "Spurious break," *Econometric Theory*, **11**, 736–749, 1995.

C.-M. Kuan and T. Liu, "Forecasting exchange rates using feedforward and recurrent networks," *Journal of Applied Econometrics*, **10**, 347–364, 1995.

L. Nunes, P. Newbold, and C.-M. Kuan, "Spurious number of breaks," *Economics Letters*, **50**, 175–178, 1996.

L. Nunes, P. Newbold, and C.-M. Kuan, "Testing for unit-roots with breaks: Evidence on the great crash and the unit-root hypothesis reconsidered," *Oxford Bulletin of Economics and Statistics*, **50**, 435–448, 1997.

C.-M. Kuan, "Tests for changes in models with a polynomial trend," *Journal of Econometrics*, **84**, 75–91, 1998.

C.-M. Kuan and C.-C. Hsu, "Change-point estimation of fractionally integrated processes," *Journal of Time Series Analysis*, **19**, 693–708, 1998.

C.-M. Kuan, "A note on tests for partial parameter instability in the trend stationary model," *Economics Letters*, **65**, 285–291, 1999.

Y.-T. Chen, R. C. Chou, and C.-M. Kuan, "Testing time reversibility without moment restrictions," *Journal of Econometrics*, **95**, 199–218, 2000.

F. Leisch, K. Hornik, and C.-M. Kuan, "Monitoring structural changes with the generalized fluctuation test," *Econometric Theory*, **16**, 835–854, 2000.

M.-Y. Chen and C.-M. Kuan, "Testing parameter constancy in models with infinite variance errors," *Economics Letters*, **72**, 11–18, 2001.

C.-C. Hsu and C.-M. Kuan, "Distinguishing between trend break models: Method and empirical evidence," *Econometrics Journal*, **4**, 171–190, 2001.

C.-M. Kuan and M.-Y. Chen, "Response surfaces of MOSUM critical values," *Applied*

Economics Letters, **9**, 133–136, 2002.

Y.-T. Chen and C.-M. Kuan, "The pseudo-true score encompassing test for non-nested hypothesis," *Journal of Econometrics*, **106**, 271–295, 2002; Corrigendum, *Journal of Econometrics*, **141**, 1412–1417, 2007.

Y.-T. Chen and C.-M. Kuan, "Time irreversibility and EGARCH effects in U.S. stock index returns," *Journal of Applied Econometrics*, **17**, 565–578, 2002.

C.-M. Kuan and W.-M. Lee, "A new test for the martingale difference hypothesis," *Studies in Nonlinear Dynamics and Econometrics*, **8:4**, Article 1, 2004.

P.-H. Hsu and C.-M. Kuan, "Re-examining the profitability of technical analysis with data snooping checks," *Journal of Financial Econometrics*, **3**, 606–628, 2005.

C.-M. Kuan, Y.-L. Huang, and R. S. Tsay, "An unobserved-component model with switching permanent and transitory innovations," *Journal of Business and Economic Statistics*, **23**, 443–454, 2005.

C.-M. Kuan and W.-M. Lee, "Robust M tests without consistent estimation of asymptotic covariance matrix," *Journal of the American Statistical Association*, **101**, 1264–1275, 2006.

C.-L. Chen, C.-M. Kuan, and C.-C. Lin, "Saving and housing of Taiwan households: New evidence from quantile regression analysis," *Journal of Housing Economics*, **16**, 102–126, 2007.

Y.-C. Hsu and C.-M. Kuan, "Change point estimation of nonstationary $I(d)$ processes," *Economics Letters*, **98**, 115–121, 2008.

C.-M. Kuan and Y.-W. Hsieh, "Improved HAC covariance matrix estimation based on forecast errors," *Economics Letters*, **99**, 89–92, 2008.

C.-M. Kuan, "Artificial neural networks," in *New Palgrave Dictionary of Economics*, S. N. Durlauf and L. E. Blume (eds.), Palgrave Macmillan, 2008.

C.-H. Huang, Y.-L. Huang, and C.-M. Kuan, "Re-examining the permanent income hypothesis with uncertainty in permanent and transitory innovation states," *Journal of Macroeconomics*, forthcoming.

C.-M. Kuan, J.-H. Yeh, and Y.-C. Hsu, "Assessing value at risk with CARE, the conditional autoregressive expectile models," *Journal of Econometrics*, forthcoming.

REFEREED ARTICLES (Local)

Y.-L. Huang, C.-M. Kuan, and K. Lin, "Identifying the turning points of business cycles and forecasting economic growth rates in Taiwan" (in Chinese), *Taiwan Economic Review*, **26**, 431–457, 1998.

C.-M. Kuan, "Some issues in time series model specification" (in Chinese), *Taiwan Economic Review*, **27**, 1–17, 1999.

J. Chou and C.-M. Kuan, "Identifying the trough of the eighth business cycle in Taiwan and the cause of its formation" (in Chinese), *Economic Papers*, No. 192, Chung-Hua

Institution for Economic Research, Taipei, 1999.

C.-n. Chen, S. Chen and C.-M. Kuan, "Uniqueness and indeterminacy: the Marshall-Lerner condition and real exchange rate dynamics," *Taiwan Economic Review*, **28**, 401–408, 2000.

S.-H. Hsu and C.-M. Kuan, "Identifying Taiwan's business cycles in 1990s: An application of the bivariate Markov switching model and Gibbs sampling" (in Chinese), *Journal of Social Sciences and Philosophy*, **13**, 515–540, 2001.

C.-C. Lin, M.-W. Hung, and C.-M. Kuan, "The dynamic behavior of short term interest rates in Taiwan: An application of the regime switching model" (in Chinese), *Academia Economic Papers*, **30**, 29–55, 2002.

S.-H. Hsu, C.-M. Kuan, and Y.-H. Luo, "Macroeconomic forecasting based on diffusion indexes" (in Chinese), *Taiwan Economy Forecast and Policy*, **36:1**, 1–28, 2005.

C.-C. Chuang and C.-M. Kuan, "A quantile regression analysis of return-volume relation: Evidence from the Taiwan and U.S. stock exchanges" (in Chinese), *Academia Economic Papers*, **33**, 379–404, 2005.

C.-L. Chen and C.-M. Kuan, "Taiwan's wage equation and gender wage discrimination: Evidence from quantile regression analysis" (in Chinese), *Academia Economic Papers*, **34**, 435–468, 2006.

S.-M. Wang, C.-M. Kuan, and J. C. Lo, "The effects of maternal characteristics and pregnancy status on birth weights" (in Chinese), *Taiwan Journal of Public Health*, **25:6**, 474–481, 2006.

BOOK

C.-M. Kuan, *Statistics: Concepts and Methods*, 2nd edition (in Chinese, 495 pages), Taipei: Hua-Tai Publisher, 2004.

PROCEEDINGS AND OTHERS

C.-M. Kuan, and H. White, "Some convergence results for learning in recurrent neural networks," in *Proceedings of the Sixth Yale Workshop on Adaptive and Learning Systems*, K. S. Narendra ed., pp. 103–109, New Haven: Yale University, 1990.

C.-M. Kuan and K. Hornik, "Implementing recurrent networks," in *Proceedings of the Seventh Yale Workshop on Adaptive and Learning Systems*, K. S. Narendra ed., pp. 64–68, New Haven: Yale University, 1992.

C.-M. Kuan, "Review of '*Money and Financial System*' — Essays on the Economy of Taiwan, vol. 4," *Digest of Chinese Studies*, 7–9, 1992.

C.-M. Kuan, "Review of '*Demand, Consumption, and Welfare Economics*' — Essays on the Economy of Taiwan, vol. 8," *Digest of Chinese Studies*, 13–15, 1992.

C.-M. Kuan, K. Hornik, and T. Liu, "Recurrent back-propagation and Newton algorithms for training recurrent neural networks," in *Substance Identification Analytics*, J. L. Flanagan et al. eds., Vol. 2093 of *Europto Series*, pp. 220–229, SPIE, 1993.

C.-M. Kuan, "Review of '*An Analysis and Forecast of International Oil Price*' — Modern Economic Studies Series No. 26," *Digest of Chinese Studies*, 9–10, 1993.

C.-M. Kuan, "Review of '*An Empirical Study of Nonlinear Consumption Function in Taiwan*' — Economics Papers No. 145," *Digest of Chinese Studies*, 11–12, 1993.

C.-M. Kuan and T. Liu, "Forecasting high-frequency futures prices: An experience with neural networks," in *Proceedings of Neural Networks in the Capital Markets*, Y. S. Abu-Mostafa ed., Pasadena: California Institute of Technology, 1994.

C.-M. Kuan, "An empirical analysis of the domestic and foreign impacts on Taiwan's real output" (in Chinese), *Essays in Honor of Lee Yuan-Tse's 70th Birthday*, pp. 803–826, Taipei: Yun-Chen, 2006.

CONFERENCE ORGANIZING/PROGRAM COMMITTEE

Far Eastern Meeting of the Econometric Society, Singapore, July 1–3, 1999.

International Conference in Honor of Gregory Chow: China and the World Economy, City University of Hong Kong, Hong Kong, June 14–16, 2002.

WEAI Pacific Rim Conference (Chair), Taipei, Taiwan, Jan. 9–12, 2003.

International Conference on the Analysis of High-Frequency Financial Data and Market Microstructure (Co-Chair), Taipei, Taiwan, Dec. 15–16, 2003.

Far Eastern Meeting of the Econometric Society (FEMES2004), Seoul, Korea, June 30–July 2, 2004.

First Symposium on Econometric Theory and Applications (SETA2005, Co-Chair), Institute of Economics, Academia Sinica, Taiwan, May 18–20, 2005.

International Conference of the Asia-Pacific Economic Association (APEA), Hitotsubashi University, Japan, July 30–31, 2005.

Far Eastern Meeting of the Econometric Society (FEMES2006), Beijing, China, July 9–11, 2006.

Second Symposium on Econometric Theory and Applications (SETA2006, Co-Chair), Xiamen University, China, April 4–6, 2006.

International Symposium on Financial Engineering and Risk Management (FERM2006), Xiamen University, China, July 5–6, 2006.

Third Symposium on Econometric Theory and Applications (SETA2007), Hong Kong University of Science and Technology, Hong Kong, April 13–15, 2007.

Far Eastern Meeting of the Econometric Society (FEMES2007, Co-Chair), Taipei, Taiwan, July 11–13, 2007.

Fourth Symposium on Econometric Theory and Applications (SETA2008, Co-Chair), Seoul National University, Korea, May 28–30, 2008.

Inaugural Conference of the Society for Financial Econometrics (SoFiE), New York University, US, June 4–6, 2008.

International Symposium on Financial Engineering and Risk Management (FERM2008), Shanghai University of Finance and Economics, China, June 9–11, 2008.

Second Annual Risk Management Conference, National University of Singapore, June 30–July 2, 2008.

Far Eastern Meeting of the Econometric Society (FEMES2008), Singapore, July 16–18, 2008.

OTHER PROFESSIONAL ACTIVITIES

Econometric Society: Member since 1989

National Science Council of Taiwan, Humanity and Social Science Division

Advisory Committee, April 1999–December 2001 and January 2005–present
Coordinator of Economics Section, January 2002–December 2004

Taiwan Economic Association: Member since 1994; Secretary General, 2001; President, 2003

Taiwan Econometric Society: Founding member; President, 2007–2010

SETA (Symposium on Econometric Theory and Applications): Founding member; Chair of the scientific committee, 2007–2010

Other Affiliations:

Taiwan: National Central University; National Chengchi University; National Cheng Kung University; National Chung Hsing University; National Sun Yat-Sen University
China: Huazhong University of Science and Technology; Xiamen University; Xi'an Jiaotong University

Referee for Agency:

National Center for Supercomputing Applications, U.S.; National Science Council, Taiwan; National Science Foundation, U.S.; Social Sciences and Humanities Research Council, Canada; University Grants Committee, Hong Kong

Referee for Journal:

Academia Economic Papers; *Applied Economics*; *Econometric Reviews*; *Econometric Theory*; *Econometrics Journal*; *Economic Modelling*; *IEEE Transactions on Information Theory*; *IEEE Transactions on Neural Networks*; *IEEE Transactions on Systems, Man, Cybernetics*; *International Economic Review*; *International Journal of Forecasting*; *Journal of Applied Econometrics*; *Journal of Asia Pacific Economy*; *Journal of Business and Economic Statistics*; *Journal of Econometrics*; *Journal of Empirical Finance*; *Journal of Forecasting*; *Journal of Macroeconomics*; *Journal of Mathematical Systems, Estimation, and Control*; *Journal of Money, Credit and Banking*; *Journal of the American Statistical Association*; *Journal of Urban Economics*; *Neural Networks*; *Quarterly Review of Economics and Finance*; *Review of Economics and Statistics*; *Sankhya, The Indian Journal of Statistics*; *Statistica Sinica*; *Taiwan Economic Review*; *Water Resource Research*