Yang Zu

Associate Professor, Department of Economics, University of Macau

yangzu@um.edu.mo yang-zu.github.io Google Scholar 0000-0002-3427-5403

Employment

Associate Professor, University of Macau, Department of Economics	*Sep 2022 – present*
Associate Professor, University of Nottingham, School of Economics	*Sep 2021 – Aug 2022*
Assistant Professor, University of Nottingham, School of Economics	*Sep 2016 – Sep 2021*
Lecturer (Assistant Professor equiv.), City, University of London	*Sep 2011 – Aug 2016*

Education

PhD Econometrics, University of Amsterdam and Tinbergen Institute	*2012*
M.A. Quantitative Economics, Wuhan University	*2006*
B.A. International Economics, Wuhan University	*2001*

Publications

[1] Li, W., Zhang, X. and **Zu, Y.** (2026). Improved Andrews' formula for testing changing mean. *Economics Letters*, 268, 113141.

[2] Astill, S., Taylor, A. M. R. and **Zu, Y.** (2026). Covariate-augmented CUSUM bubble monitoring procedures. *Econometric Theory* (early access).

[3] Zhang, R., **Zu, Y.** and Li, W. (2026). Statistical comparison of forecasts made at different frequencies. *Journal of Business and Economic Statistics*, 44, 1279–1291.

[4] Harvey, D. I., Leybourne, S. J., Tatlow, B. S. and **Zu, Y.** (2025). Unit root tests for explosive financial bubbles in the presence of deterministic level shifts. *Oxford Bulletin of Economics and Statistics*, 87, 880–898.

[5] Harvey, D. I., Leybourne, S. J. and **Zu, Y.** (2025). Testing for equal average forecast accuracy in possibly unstable environments. *Journal of Business and Economic Statistics*, 43, 643–656.

[6] Harvey, D. I., Leybourne, S. J., Taylor, A. M. R. and **Zu, Y.** (2025). A new heteroskedasticity-robust test for explosive bubbles. *Journal of Time Series Analysis*, 46, 846–866.

[7] Harvey, D. I., Leybourne, S. J. and **Zu, Y.** (2024). Tests for equal forecast accuracy under heteroskedasticity. *Journal of Applied Econometrics*, 39, 850–869.

[8] Harvey, D. I., Leybourne, S. J. and **Zu, Y.** (2023). Estimation of the variance function in structural break autoregressive models with non-stationary and explosive segments. *Journal of Time Series Analysis*, 44, 181–205.

[9] Astill, S., Harvey, D. I., Leybourne, S. J., Taylor, A. M. R. and **Zu, Y.** (2023). CUSUM-based monitoring for explosive episodes in financial data in the presence of time-varying volatility. *Journal of Financial Econometrics*, 21, 187–227.

[10] Boswijk, H. P. and **Zu, Y.** (2022). Adaptive testing for cointegration with nonstationary volatility. *Journal of Business and Economic Statistics*, 40, 744–755.

[11] Harvey, D. I., Leybourne, S. J. and **Zu, Y.** (2020). Sign-based unit root tests for explosive financial bubbles in the presence of deterministically time-varying volatility. *Econometric Theory*, 36, 122–169.

[12] Harvey, D. I., Leybourne, S. J. and **Zu, Y.** (2019). Testing explosive bubbles with time-varying volatility. *Econometric Reviews*, 38, 1131–1151.

[13] Boswijk, H. P. and **Zu, Y.** (2018). Adaptive wild bootstrap testing for a unit root with nonstationary volatility. *Econometrics Journal*, 21, 87–113.

[14] **Zu, Y.** and Boswijk, H. P. (2017). Consistent nonparametric specification tests for stochastic volatility models based on the return distribution. *Journal of Empirical Finance*, 41, 53–75.

[15] **Zu, Y.** (2015). A note on asymptotic normality of the kernel deconvolution density estimator with logarithmic chi-square noise. *Econometrics*, 3, 561–576.

[16] **Zu, Y.** (2015). Nonparametric specification tests for stochastic volatility models based on volatility density. *Journal of Econometrics*, 187, 323–344.

[17] **Zu, Y.** and Boswijk, H. P. (2014). Estimating spot volatility with high-frequency data. *Journal of Econometrics*, 181, 117–135.

Teaching

University of Macau:

Statistics II (2nd-year undergraduate)

Econometric Analysis II (postgraduate)

Advanced Methods in Econometrics (PhD)

University of Nottingham:

Economic Data Analysis (postgraduate, 2016–2021, large class; last evaluation 4.3/5)

Time Series Econometrics (postgraduate, 2016–2021; last evaluation 4.1/5)

City, University of London:

Financial Econometrics (postgraduate, 2011–2015; last evaluation 4.1/5)

Numerical Methods in Finance with MATLAB (postgraduate, 2011–2015; average 4.8/5, 2012–2015)

Financial Risk Management (postgraduate, 2015)

Administrative Responsibilities

Programme Coordinator, MSc in Economics, University of Macau

Seminar organiser, Economics, University of Macau

Co-Director, MSc Data Science and Economics, University of Nottingham

Co-Director, Year 2 Undergraduate Programme, University of Nottingham

Seminar organiser, Granger Centre Seminar Series, University of Nottingham

Scholarships and Grants

University of Macau APAEM Seed Grant, MOP 100,000; 60,000

University of Macau Multi-Year Research Grant, MOP 125,000

University of Macau Startup Grant, MOP 200,000

Leverhulme Trust Research Fellowship, 2020, £47,811

Royal Economic Society Special Project Grant, 2019, £2,500

NBER-NSF Time Series Conference Travel Grant, 2019, $500

University of Nottingham International Collaboration Fund, 2019, £946

British Council Higher Education Links Travel Grant (Co-I), 2019

City University London Pump Priming Fund, 2013, £6,700

C. Willems Stichting Travel Grant to visit Oxford University, 2010, €1,050

Econometric Society World Congress Travel Grant, 2010, $1,000

PhD Examination

Mark Hallam, City University London, 2013

Konul Mustafayeva, King's College London, 2020

Refereeing

Journal of Econometrics, Econometric Theory, Journal of Business and Economic Statistics, Journal of Time Series Analysis, Journal of Economic Dynamics and Control, Economics Letters, Econometrics and Statistics, Journal of Applied Statistics, Quantitative Finance, Econometric Reviews, Econometrics, Managerial Finance, Bulletin of Economic Research.

Academic Visiting

University of Amsterdam — May 2014, June 2016, June 2019

Oxford-Man Institute of Quantitative Finance, University of Oxford — June 2010