ZHENLIN YANG

Professor of Economics & Statistics

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DEGREES

1992	Ph.D., Statistics, University of Alberta, Canada.
1987	M.Sc., Applied Statistics, University of Guelph, Canada.
1984	Diploma, Industrial Statistics, Anhui University of Technology, China.
1983	B.Eng., Metal Materials, Northeastern University, China.

RESEARCH INTERESTS

- Spatial Econometrics
- Panel Data Models
- Bootstrap methods for Refined Inferences
- Event Time Analysis

EDITORISL SERVICE

Co-Editor: Regional Science and Urban Economics, Jan. 2015 – Dec. 2017.

Managing Guest Editor for "*New Advances in Spatial Econometrics: Interactions Matter*", a Special Issue for Regional Science and Urban Economics, 2016-17, with Guest Editors, Nicolas Bebarsy and Cem Ertur.

Guest Editor for "*Spatial Econometrics: New Methods and Applications*", a special issue for Regional Science and Urban Economics, 2017-18.

Associate Editor: Regional Science and Urban Economics, Jan. 2018 – Present.

Associate Editor: Letters in Spatial and Resource Sciences, Nov. 2025 - Present

Associate Editor: Journal of Spatial Econometrics, Jan. 2019 – June 2024.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Member, The Econometric Society
- Member, The Spatial Econometrics Association (SEA)
- Member, The American Statistical Association (ASA)
- Life Member, The International Chinese Statistical Association (ICSA)

HONORS, AWARDS, ACHIEVEMENTS

2019 **Fellow** of Spatial Econometrics Association

2017	**Lee Kong Chian Fellow** (1/07/2017--30/06/2021)
2015	**Research Excellence Award**, School of Economics, Singapore Management University.
2015	**2015 Outstanding Reviewer** *for Computational Statistics and Data Analysis*
2006	**Lee Kuan Yew Fellow for Research Excellence**, Singapore Management University.
1998	**Teaching Excellence Award**, 1998, National University of Singapore
1998	**Teaching Excellence Award**, 1998, Faculty of Arts and Social Sciences, National University of Singapore

Publications

[1] Meng, X. Y. and Yang, Z. L. (2025a). Genuinely unbalanced spatial panel data models: fixed effects M-estimation and inference. ***Econometric Review***, https://doi.org/10.1080/07474938.2025.2597865.

[2] Li, L. Y., Miao, K. and Yang, Z. L. (2025). Spatial dynamic panel data models with interactive fixed effects: M-estimation and inference with fixed and relatively small *T*. ***Econometric Review*****,** https://doi.org/10.1080/07474938.2025.2559790.

[3] Meng, X. Y. and Yang, Z. L. (2025b). Fixed effects estimation of spatial panel model with missing responses: an application to US state tax competition. ***Journal of Business and Economic Statistics,*** https://doi.org/10.1080/07350015.2025.2539470.

[4] Akgun, O., Pirotte, A., Urga, G. and Yang, Z. L. (2023). Equal predictive ability tests based on panel data with applications to OECD and IMF forecasts. ***International Journal of Forecasting*** 40, 202-228.

[5] Baltagi, B. H., Deng, Y., Li, J., and Yang, Z. L. (2022). Cities in a pandemic: evidence from China. ***Journal of Regional Science*** 63, 379-408.

[6] Huang, N. Q. and Yang Z. L. (2021). Spatial dynamic models with short panels: evaluating the impact of home purchase restrictions on housing prices. ***Economic Modelling*** 103, 105597.

[7] Baltagi, B. H., Pirotte, A. and Yang, Z. L. (2021). Diagnostic tests for homoscedasticity in spatial cross-sectional or panel models. ***Journal of Econometrics*** 224, 245-270.

[8] Yang, Z. L. (2021). Joint tests for dynamic and spatial effects in short dynamic panel data models with fixed effects and heteroskedasticity. ***Empirical Economics*** **60**, 51-92.

[9] Li, L. Y. and Yang, Z. L. (2021). Spatial dynamic panel data models with correlated random effects. ***Journal of Econometrics*** 221, 424-454.

[10] Liu, S. F. and Yang, Z. L. (2020). Robust estimation and inference of spatial panel data models with fixed effects. ***Japanese Journal of Statistics and Data Science*** **3**, 257–311.

[11] Li, L. Y. and Yang, Z. L. (2020). Estimation of fixed effects spatial dynamic panel data models with small *T* and unknown heteroskedasticity. ***Regional Science and Urban Economics*** **81**, 103520.

[12] Xu, Y. H. and Yang, Z. L. (2020). Specification tests for temporal heterogeneity in spatial panel data models with fixed effects. ***Regional Science and Urban Economics*** **81**, 103488.

[13] Yang, Z. L. (2019). Editorial introduction to the special issue entitled: Spatial econometrics: New methods and applications. ***Regional Science and Urban*** **Economics 76**, 1.

[14] Yang, Z. L. (2018). Bootstrap LM tests for higher order spatial effects in spatial linear regression models. ***Empirical Economics*** **55**, 35–68.

[15] Debarsy, N., and Yang, Z. L. (2018). Editorial for the special issue entitled: New advances in spatial econometrics: Interactions matter. ***Regional Science and Urban*** **Economics 72**, 1-5.

[16] Yang, Z. L. (2018). Unified M-estimation of fixed-effects spatial dynamic models with short panels. ***Journal of Econometrics*** **205**, 423-446.

[17] Su, L. J. and Yang, Z. L. (2018). Asymptotics and bootstrap for random-effects panel data transformation models. ***Econometric Reviews*** **37,** 602-625.

[18] Shen, Y. and Yang, Z. L. (2017). Improved likelihood inferences for Weibull regression model. ***Journal of Statistical Computation and Simulation*** **87**, 2349-2371.

[19] Yang, Z. L., Yu, J. H, and Liu, S. F. (2016). Bias correction and refined inferences for fixed effects spatial panel data models. ***Regional Science and Urban Economics*** **61**, 52-72.

[20] Desmond, A. F. and Yang, Z. L. (2016). Asymptotically refined score and GOF tests for inverse Gaussian models. ***Journal of Statistical Computation and Simulation*** **86**, 3243-3269.

[21] Liu, S. F. and Yang, Z. L. (2015). Improved Inferences for spatial regression models. ***Regional Science and Urban Economics*** **55**, 55-67.

[22] Liu, S. F. and Yang, Z. L. (2015). Asymptotic distribution and finite-sample bias correction of QML estimators for spatial error dependence Model. ***Econometrics,*** **3**, 376-411.

[23] Liu, S. F. and Yang, Z. L. (2015). Modified QML estimation of spatial autoregressive models with unknown heteroskedasticity and normality. ***Regional Science and Urban Economics*****, 52,** 50-70.

[24] Yang, Z. L. (2015). LM tests of spatial dependence based on bootstrap critical values. ***Journal of Econometrics*** **185**, 33-39.

[25] Su, L. J. and Yang, Z. L. (2015). QML estimation of dynamic panel models with spatial errors. ***Journal of Econometrics*** **185**, 230-258.

[26] Yang, Z. L. (2015). A general method for third-order bias and variance correction on a nonlinear estimator (former title: Bias-corrected estimation for spatial autocorrelation). ***Journal of Econometrics*** **186**, 178-200.

[27] Shen, Y. and Yang, Z. L. (2015). Bias-correction for Weibull common shape estimation. ***Journal of Statistical Computation and Simulation*** **85**, 3017-3046.

[28] Baltagi, B. H. and Yang, Z. L. (2013). Standardized LM tests for spatial error dependence in linear or panel regressions. ***Econometrics Journal*** **16**, 103-134.

[29] Baltagi, B. H. and Yang Z. L. (2013). Heteroskedasticity and non-normality robust LM tests of spatial dependence. ***Regional Science and Urban Economics*** **43,** 725-739.

[30] Desmond, A. F. and Yang, Z. L. (2011). Score tests for inverse Gaussian mixture. ***Applied Stochastic Models in Business and Industry* 27**, 633–648.

[31] Yang, Z. L. and Huang, J. H. (2011). A transformed random effects model with applications. ***Applied Stochastic Models in Business and Industry* 27**, 222–234.

[32] Yang, Z. L., Gan. L. and Tang F. F. (2010). A study of price evolution in online toy market. ***Economics:*** *The Open Access, Open-Assessment E-Journal, Vol. 3*

[33] Yang, Z. L. (2010). A robust LM test for spatial error components. ***Regional Science and Urban Economics* 40**, 299-310.

[34] Yang, Z. L. and Tse, Y. K. (2008). Generalized LM tests for functional form and heteroscedasticity. ***Econometrics Journal*, 11** 349-376.

[35] Yang, Z. L., Wu, E. K. H. and Desmond, A. F. (2008). Inference for general parametric functions in Box-Cox-type transformation models. ***Canadian Journal of Statistics* 36**, 301-319.

[36] Yang, Z. L. and Lin, K. J. (2007). Improved maximum-likelihood estimation for the common shape of several Weibull distributions. ***Applied Stochastic Models in Business and Industry* 23**, 373-383.

[37] Yang, Z. L. and Tse, Y. K. (2007). A corrected plug-in method for quantile interval construction through a transformed regression. ***Journal of Business and Economic Statistics* 25**, 356-376.

[38] Yang, Z. L., Tse, Y. K. and Bai, Z. D. (2007). Statistics with estimated parameters. ***Statistica Sinica* 17**, 817-837.

[39] Yang Z. L., Xie, M. and Wong, A. C. M. (2007). A unified confidence interval for reliability related Weibull quantities. ***Journal of Statistical Computation and Simulation* 77**, 365-378.

[40] Yu, J., Yang, Z. L. and Zhang, X. B. (2006). A class of nonlinear stochastic volatility models and its implications on pricing currency options. ***Computational Statistics and Data Analysis* 51**, 2218-2231.

[41] Yang, Z. L. (2006). A modified family of power transformations. ***Economics Letters*, 92**, 14-19.

[42] Xing, X. L., Yang, Z. L. and Tang, F. F. (2006). A comparison of time-varying online price and price dispersion between multichannel and Dotcom DVD retailers. ***Journal of Interactive Marketing* 20**, 3-10.

[43] Yang, Z. L. Li, C. W. and Tse, Y. K. (2006). Functional form and spatial dependence in dynamic panels. ***Economics Letters* 91**, 138-145.

[44] Yang, Z. L. and Tse, Y. K. (2006). Modeling the firm-size distribution using Box-Cox heteroscedastic regression. ***Journal of Applied Econometrics* 21**, 541-653.

[45] Koh, W. T.H. Yang. Z. L. and Zhu, L. J (2006). Lottery rather than waiting-line auction. ***Social Choice and Welfare* 27,** 289-310.

[46] Yang, Z. L. and Tsui, A. K. (2004). Analytically calibrated Box-Cox percentile limits for duration and event-time models. ***Insurance: Mathematics and Economics* 35**, 649-677.

[47] Yang Z. L. and Chen, G. (2004). Tests of transformation in nonlinear regression. ***Economics Letters* 84**, 391-398.

[48] Xing, X. L., Tang, F. F. and Yang, Z. L. (2004). Pricing dynamics in the online consumer electronics market. ***Journal of Product and Brand Management* 13**, 429-441.

[49] Leung, H. M. Tan, S. L. and Yang, Z. L. (2004). What has luck got to do with economic development? An interpretation of resurgent Asia's growth experience. ***Journal of Policy Modeling*** **26**, 373-385.

[50] Yang, Z. L. and Abeysinghe, T. (2003). A score test for Box-Cox functional form. ***Economics Letters*** **79**, 107-115.

[51] Yang, Z. L. and Xie, M. (2003). Efficient estimation of the Weibull shape parameter based on a modified profile likelihood. ***Journal of Statistical Computation and Simulation*** **73**, 115-123.

[52] Yang. Z. L., See, S. P and Xie, M. (2003). Transformation approaches for the construction of Weibull prediction interval. ***Computational Statistics and Data Analysis*** **43**, 357-368.

[53] Yang, Z. L. and Abeysinghe, T. (2002). An explicit variance formula for the Box-Cox functional form estimator. ***Economics Letters,*** **76**, 259-265.

[54] Yang. Z. L. (2002). Comment on "Box-Cox transformation in linear models: large sample theory and tests of normality" by Chen, G., Lockhart, R. A. and Stephens, M. A. ***Canadian Journal of Statistics*** **30**, 222-226.

[55] Yang. Z. L. (2002). Median estimation through a regression transformation. ***Canadian Journal of Statistics*** **30**, 235-242.

[56] Yang, Z. L., Xie, M., Kuralmani, V. and Tsui, K.L. (2002). On the performance of geometric chart with estimated control limits. ***Journal of Quality Technology*** **34**, 448-458.

[57] Yang, Z. L., See, S. P. and Xie, M. (2002). An investigation of transformation-based prediction interval for the Weibull median life. ***Metrika*** **56**, 19-29.

[58] Yang, Z. L. (2001). Predicting a future median life through a power transformation. ***Lifetime Data Analysis*** **7**, 305-317.

[59] Yang, Z. L., and Lee, R. T. C. (2001). On the failure rate estimation for the inverse Gaussian distribution. ***Journal of Statistical Computation and Simulation*** **71**, 201-213.

[60] Xie, M., Yang, Z. L. and Gaudoin, O. (2000). More on the mis-specification of the shape parameter with Weibull-to-exponential transformation. ***Quality and Reliability Engineering International*** **16**, 281-290.

[61] Yang, Z. L. and Xie, M.(2000). Process monitoring for the exponentially distributed Characteristics through an Optimal Normalizing Transformation. ***Journal of Applied Statistics*** **27**, 1050-1063.

[62] Yang, Z. L. (2000). Predictive densities for the lognormal distribution and their applications. ***Microelectronics Reliability*** **40**, 1051-1059.

[63] Yang, Z. L. (2000). A new statistics for regression transformation. ***Test*** **9**, 123-132.

[64] Yang, Z. L. (1999). Maximum likelihood predictive densities for the inverse Gaussian distribution with application to reliability and lifetime predictions. ***Microelectronics Reliability*** **39**, 1413-1421.

[65] Yang, Z. L. (1999). Predicting a future lifetime through Box-Cox transformation. ***Lifetime Data Analysis*** **5**, 265-279.

[66] Yang, Z. L. (1999). Estimating transformation and its effects on Box-Cox *T*-ratio. ***Test*** **8**, 167-190.

[67] Yang, Z. L. (1998). An alternative approximation to the variance of transformation Score. ***Journal of Statistical Computation and Simulation*** **62**, 181-188.

[68] Desmond, A. F. and Yang, Z. L. (1998). A comparison of likelihood and Bayesian inference for the threshold parameter in the inverse Gaussian distribution. ***Communications in Statistics, Theory and Methods* 27**, 2173-2183.

[69] Yang, Z. L. (1998). On robustness of usual confidence region under transformation misspecification. ***Journal of Statistical Computation and Simulation* 61**, 175-190.

[70] Hooper, P. M. and Yang, Z. L. (1997). Confidence intervals following Box-Cox transformation. ***Canadian Journal of Statistics* 25**, 401-416.

[71] Yang, Z. L. (1997). More on the estimation of Box-Cox transformation. ***Communications in Statistics, Simulation and Computation* 26**, 1063-1074.

[72] Yang, Z. L. (1996). Some asymptotic results on Box-Cox transformation methodology. ***Communications in Statistics, Theory and Methods* 25**, 403-415.

[73] Desmond, A. F. and Yang, Z. L. (1995). Shortest prediction intervals for the Birnbaum-Saunders distribution. ***Communications in Statistics, Theory and Methods* 24**, 1383-1401.

Articles in Review Process

[1] Meng, X. Y. and Yang, Z. L. (2025). Threshold spatial panel data models with fixed effects. ***Journal of Econometrics*****,** *Revised & Resubmitted*.

[2] Akgun, O., Pirotte, A., Urga, G., and Yang, Z. (2025). Testing clustered equal predictive ability with unknown clusters. ***Quantitative Economics****, Under Review.*

[3] Pirotte, A. and Yang, Z. L. (2025). Multi-dimensional spatial panel data models with fixed effects: formulation, estimation, and inference. ***Journal of Econometrics***, *Under Review*.

[4] Li, L. Y., Meng, X. Y., and Yang, Z. L. (2025). Dynamic spatial panel data models with fixed effects: new general methods and application. ***Journal of Business and Economic Statistics***, *Under review*.

Working Papers

[1] Pao-Li Chang, Ryo Makioka, Bo Lin Ng, and Zhenlin Yang (2025). Estimating firm-level production functions with spatial dependence in output, input, and productivity.

[2] Zhang, W., Yang, Y., and Yang Z. (2024). Dynamic credit risk spread in multi-layer networks.

[3] Pirotte, A. and Yang, Z. L. (2024). Identification and estimation of space or time invariant covariates effects in multi-dimensional panels with fixed effects.

[4] Meng, X. Y. and Yang, Z. L. (2026). Identification and estimation of endogenous and dynamic social effects with network panels.

[5] Liu, S. F. and Yang, Z. L. (2022). Heteroskedasticity robust estimation and testing for higher-order spatial autoregressive models.

[6] Xu, Y. H. and Yang, Z. L. (2022). Adjusted quasi score estimation of spatial panel data models with time-varying coefficients.

[7] Yang, Z. L. (2022). Initial condition free and heteroskedasticity robust estimation and inferences for dynamic panel data models.

[8] Wu, Y. F. and Yang. Z. L. (2022). Analysis of large real estate prices data: a high-order spatiotemporal autoregression approach.

Conference Proceedings & Book Reviews

[1] Yang, Z. L. (2007). Modelling spatial dependence and social interactions. *Knowledge Hub, Singapore Management University.*

[2] Yu, J. and Yang, Z. L. (2006). A class of nonlinear stochastic volatility models. *Proceedings of the* 5th International Conference on Computational Intelligence in Economics and Finance

[3] Su, L. J. and Yang, Z. L. (2006). QML estimation of dynamic panel data models with spatial errors. *Proceedings of the 3rd Singapore Econometrics Study Group Meeting.*

[4] Yang, Z. L. (2005). Review of "Theory of Regular Economies, by Ryo Nagata, 2004, World Scientific Publishing, Singapore", *The Singapore Economic Review*, 50, 289-291.

[5] Yang, Z. L., Prediction intervals for the inverse Gaussian distribution with Applications to Lifetime Data. *Proceedings of the International Workshop on RELIABILITY MODELLING AND ANALYSIS – From Theory to Practice, 1998.* M. Xie and D. N. P. Murthy edited, p81-88. *National University of Singapore.*

Unpublished Working Papers

[1] Yang, Z. L. and Shen, Y. (2011). A simple and reliable method of inference for spatial autoregressive model. (revised version: 2014).

[2] Yang Z. L., Xing, X. L., Babin, B. and Tang F. F. (2008). Price evolution in online video and DVD markets.

[3] Su, L. J. and Yang, Z. L. (2007). Instrumental variable quantile estimation of spatial autoregressive models. (revised versions: 2011, 2012).

[4] Yang, Z. L. (2006). Joint modelling and testing for local and global spatial externalities.

[5] Yang, Z. L. (2005). Quasi-maximum likelihood estimation of spatial panel data regression.

[6] Xing, X. L. and Yang Z. L. (2005). Determinants of job turnover intentions: evidence from Singapore.

[7] Yang, Z. L. (2004). Trans-normal distribution: a flexible model for duration and event-time data.

[8] Yang Z. L. (2003). Fiducial predictive densities and econometric duration analysis.

[9] Yang Z. L. (2002). Monitoring process variability with symmetric control limits.

[10] Yang Z. L. (2000). On the proper use of Box-Cox transformation method: a note on a Taguchi case study.

ACADEMIC VISITS

- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May-June, 2025.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May-June, 2024.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May-June, 2023.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May-June, 2022.

- Visiting Professor: Dept. of Mathematics and Statistics, University of Guelph, Canada, Nov. 2019.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May-June, 2019.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), June, 2018.
- Visiting Professor: Northeastern University, Shenyang, China, Oct., 2017.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), May, 2017.
- Visiting Professor: Northeastern University, Shenyang, China, Dec., 2016.
- Visiting Professor: CRED, University of Pantheon-Assas (Paris II), June, 2016.
- Visiting Professor: Dept. of Mathematics and Statistics, University of Guelph, Canada, Oct. 2014.
- Dept. of Statistics, Korea University, May 2007.
- Dept. of Econometrics and Business Statistics, Monash University, Australia, July 2004.
- Dept. of Statistics, Chinese U. of Hong Kong, Hong Kong, China, April 2004.
- Dept. of Marketing, Chinese U. of Hong Kong, Hong Kong, China, Feb. 2004.
- Dept. of Marketing, Chinese U. of Hong Kong, Hong Kong, China, Dec. 2003.
- Dept. of Mathematics and Statistics, University of Guelph, Canada, Sept.-Oct. 2003.

KEYNOTE, INVITED TALKS & DISCUSSIONS

1. Identification and estimation of endogenous and dynamic social effects with network panels. *Invited talk at Melbourne Workshop on Spatial and Spatial-Temporal Data Analysis, Melbourne Business School, July 21, 2025.*
2. Identification and estimation of endogenous social effects: a spatial panel data approach. ***Keynote lecture*** *for the 2023 National Quantitative Economics Doctoral Forum*. *Xiamen University, Xiamen, China, December 16-17, 2023*.
3. A spatial panel data model for the identification and estimation of endogenous social effects. *Invited talk at 6th International Conference on Econometrics and Statistics (EcoSta2023), Waseda University, Tokyo, Japan, August 1-3, 2023*.
4. Dynamic spatial panel data models with interactive fixed effects: M-estimation and inference with fixed and relatively small *T. Invited talk at International Symposium on Advance in Panel Data and Time Series Econometrics in Honor of Professor Cheng Hsiao*. *Xiamen University, China, July 8-9, 2023*.
5. Dynamic spatial panel data models with interactive fixed effects: M-estimation and inference with fixed and relatively small *T.* ***Keynote speech*** *at SEW2023: 21st International Workshop on Spatial Econometrics and Statistics*. *University of Burgundy*, *Dijon, France, May 25-26, 2023*.
6. Spatial dynamic panel data models with interactive fixed effects: M-estimation and inference with small *T*. *Invited talk at Cardiff University, UK, October 29, 2021.*
7. Robust estimation of spatial panel data models with time varying coefficients. *Invited talk at WISE, Xiamen University, China, July 16, 2021.*
8. Unbalanced panel data models with fixed effects. *Invited talk at WISE, Xiamen University, China, July 12, 2021.*

9. Spatial dynamic panel data models with small *T*: theory and applications. *Invited talk at University of Illinoi at Urbana-Champaign, US, Nov. 22, 2019.*
10. Adjusted quasi score estimation of structural parameters in the presence of incidental parameters. ***Plenary Lecture*** *at the XIII Conference of Spatial Econometrics Association, Pittsburgh, US, Nov. 14-15, 2019*
11. Adjusted quasi score estimation of structural parameters in the presence of incidental parameters. *Invited talk at the 2019 Shanghai Workshop of Econometrics, Shanghai University of Finance and Economics, Shanghai, China, June 23-24, 2019.*
12. Unbalanced spatial panel data models with fixed effects. *Invited Talk at the 2019 Asia Meeting of the Econometric Society, Xiamen University, China, June 14-16, 2019.*
13. Specification tests for time-heterogeneity in spatial panel data models with fixed effects. *Invited Talk at the Tohoku University, Japan, Dec. 20, 2018.*
14. Spatial dynamic panel data models with small *T*: theory and application. ***Keynote Speech*** *at the Conference on the Frontiers of New Economic Geography*, *School of Economics and Management, Southeast University, Nanjing, China, Nov. 17-18, 2018.*
15. Diagnostic tests for homoscedasticity in spatial cross-sectional or panel models. *Invited Talk at the Audit University, Nanjing, China, Nov. 16, 2018.*
16. Spatial dynamic panel data models with correlated random effects. ***Keynote Speech*** *at the 8th Shanghai Econometrics Workshop, School of Economics, SUFE, Shanghai, China, June 18-19, 2018.*
17. Bootstrap LM tests for higher order spatial effects in spatial linear regression models. *Invited talk at Northeastern University, Shenyang, China, 11 Oct., 2017.*
18. Discussion on "Can lending constraints cool a housing boom? Lu Han, University of Toronto". *Invited discussion at the IRES Symposium: Housing Market and the Macro Economy, National University of Singapore, 19-20, May, 2017.*
19. Joint M-tests for dynamic and spatial effects in short panel data models with fixed effects and unknown heteroskedasticity. *Invited talk at the 2nd Econometrics Workshop at the Chinese University of Hong Kong, 29 April 2017.*
20. Unified M-estimation of fixed effects spatial dynamic models with short panels. *Invited talk at Northeastern University, Shenyang, China, Dec. 12, 2016.*
21. Initial-Condition Free Estimation of Fixed Effects Dynamic Panel Data Models with Non-Spherical Errors. *Invited talk at the 6th Shanghai Econometrics Workshop, School of Economics, SUFE, Shanghai, China, June 22-23, 2016.*
22. Unified M-estimation of fixed effects spatial dynamic models with short panels. *Invited talk at Shanghai University of Finance and Economics, China, 6 May 2015.*
23. LM tests of spatial dependence based on bootstrap critical values. *Invited talk at University of Guelph, Canada, 22 October 2014.*
24. A simple and robust method of inference for spatial Autocorrelation. *Invited Seminar at the Division of Economics, Nanyang Technological University, Singapore, 3 November 2010.*
25. Instrumental variable quantile estimation of spatial autoregressive models (with Liangjun Su). *Contributed talk at the Far Eastern and South Asian Meeting of Econometric Society, 16-18 July 2008; Invited talk at the Conference in Honor or Professor Bai Zhidong on his 65th Birthday, 20 July 2008*

26. Spatial dependence, functional-form selection, and dynamic effects in panel models. *Invited talks at Department of Economics, Korea University, 21 May 2007; and School of Economics, Yonsei University, South Korea, 22 May 2007.*
27. Asymptotics and bootstrap for transformed panel data regressions. *Invited talk at the Department of Statistics, Korea University, 18 May 2007.*
28. A transformed random effects model with applications. *Invited talk at the Division of Economics, Nanyang Technological University, Singapore, 31 January 2007.*

CONFERENCE PRESENTATIONS & DISCUSSIONS

1. Identification and estimation of endogenous and dynamic social effects with network panels. *Contributed talk at MPSS (Monash-Princeton-SJTU-SMU) Conference in Econometrics 2025, Monash University, August 11-12, 2025.*
2. Identification and estimation of endogenous and dynamic social effects with network panels. *Contributed talk at 23rd International Workshop on Spatial Econometrics and Statistics SEW 2025: Saint-Étienne, France, June 4-6, 2025*
3. Multi-dimensional spatial panel data models with fixed effects: formulation, estimation and inference. *Contributed talk at 7th International Conference on Econometrics and Statistics, Beijing Normal University, Beijing, China, July 17-19, 2024.*
4. Adjusted quasi score estimation of panel data models with time-varying covariate and spatial effects. *Contributed talk at XVIII World Conference of the Spatial Econometrics Association, Groningen, the Netherlands, June 24-25, 2024.*
5. Analysis of large real estate prices data: a high-order spatiotemporal autoregression approach. *Contributed talk at the 22nd International Workshop in Spatial Econometrics and Statistics*, *Grenoble, France, May 23-24, 2024.*
6. Heteroskedasticity robust estimation and testing for high order spatial autoregressive models. *Contributed talk at the 18th International Workshop on Spatial Econometrics and Statistics, Paris, 23-24 May 2019.*
7. Discussion on "Credit market spillovers: evidence from a syndicated loan market network, Abhimanyu Gupta, Sotirios Kokas, and Alexander Michaelides, University of Essex", *at the 18th International Workshop on Spatial Econometrics and Statistics, Paris, 23-24 May 2019.*
8. Diagnostic tests for homoscedasticity in spatial cross-sectional or panel models. *Contributed talk at the XII World Conference of the Spatial Econometrics Association, Vienna, June 11-12, 2018.*
9. Discussion on "Spatial autoregression with non-summable weight matrices – improving asymptotic analysis of Gaussian QML estimators, Jakub Olejnik, University of Lodz, Poland", *at the XII World Conference of the Spatial Econometrics Association, Vienna, June 11-12, 2018.*
10. Bootstrap LM tests for higher order spatial effects in spatial linear regression models. *Contributed talk at the XI World Conference of the Spatial Econometrics Association, Singapore, June 13-15, 2017.*
11. Discussion on "Obtaining spatial data through attribute sampling – a new method to identify rare events when there is no data, Qian Guo, University of London", *at the XI World Conference of the Spatial Econometrics Association, Singapore, June 13-15, 2017.*

12. Initial-condition free estimation of fixed effects dynamic panel data models with non-spherical errors. *Contributed talk at the X World Conference of the Spatial Econometrics Association, Rome, Italy, June 13-15, 2016.*
13. Discussion on "Testing for serial correlation in spatial panels, by Giovanni Millo", *at the X World Conference of the Spatial Econometrics Association, Rome, Italy, June 13-15, 2016.*
14. Unified M-estimation of fixed effects spatial dynamic models with short panels. *Invited talk at CRED, University of Pantheon-Assas (Paris II), 6 June 2016.*
15. Joint tests for dynamic and spatial effects in short panel data models with fixed effects. *Contributed talk at the 15th International Workshop on Spatial Econometrics and Statistics, Orleans, 27-28 May 2016.*
16. Discussion on "Dynamic spatial panel data model with spatial moving average errors, Badi Baltagi, Bernard Fingleton and Alain Pirotte", *at the 15th International Workshop on Spatial Econometrics and Statistics, Orleans, 27-28 May 2016.*
17. Initial-condition free estimation of fixed effects dynamic panel data models with non-spherical errors. *Contributed talk at the 2016 Tripartite Conference (Hiroshima University, Hiroshima University of Economics, and Singapore Management University)*.
18. Improved inferences for spatial regression models. *Contributed talk at the 14th International Workshop on Spatial Econometrics and Statistics, Paris, 27-28 May 2015.*
19. Discussion on "Non-nested testing of spatial correlation, Miguel A. Delgado and Peter M. Robinson", *at the 14th International Workshop on Spatial Econometrics and Statistics, Paris, 27-28 May 2015.*
20. Unified M-estimation of fixed effects spatial dynamic models with short panels. *Contributed talk at The VIII World Conference of the Spatial Econometrics Association, Zurich, 11-13 June 2014.*
21. Unified QML estimation of dynamic models with short panels. *Contributed talk at the Asia Meeting of the Econometric Society, Singapore, 2-4 August 2013.*
22. QML estimation of dynamic panel data models with spatial errors. *Contributed talk at the 18th International Panel Data Conference, Paris, 5-6 July 2012.*
23. LM tests of spatial dependence based on bootstrap critical values. *Contributed talk at Tsinghua International Conference for Econometrics, Beijing, 15-16 May 2012.*
24. A general method for third-order bias and variance corrections for a nonlinear parameter. *Contributed talk at SETA 2012, Shanghai, 19-21 May 2012.*
25. Standardized LM tests for spatial error dependence in linear or panel regressions. *Contributed Talk at the 2011 Asian Meeting of the Econometrics Society, Seoul, 11-13 August 2011.*
26. LM tests of spatial dependence based on bootstrap critical values. *Contributed talk at the Vth World Conference of the Spatial Econometrics Association, Toulouse, 6-8 July 2011.*
27. Discussion on: "On the application of bootstrap methods in spatial econometric models, by Gianfranco Piras and Lozano-Gracia Nancy", *at the Vth World Conference of the Spatial Econometrics Association, Toulouse, 6-8 July 2011.*
28. Bias-corrected estimation for spatial autocorrelation. *Contributed talk at the IVth World Conference of the Spatial Econometrics Association*, *Chicago, 9-12 June 2010.*

29. Discussion on "Pseudo GLS regression estimation with spatial data, by Cuicui Liu", *at the IVth World Conference of the Spatial Econometrics Association*, *Chicago, 9-12 June 2010.*
30. Bias-corrected estimation for spatial autocorrelation. *Invited Seminar at the School of Economics, Singapore Management University, 23 October 2009*.
31. Tests for spatial dependence under distributional misspecifications. *Contributed talk at the II World Conference of the Spatial Econometrics Association, New York, 17-19 Nov 2008.*
32. Discussion on "More efficient estimation of the spatial error components model, by Fernando Carriazo and Edward Coulson", *at the II World Conference of the Spatial Econometrics Association, New York, 17-19 Nov 2008.*
33. Asymptotics and bootstrap for transformed panel data regressions (with Liangjun Su). *Contributed talk at the 14th International Conference on Panel Data, WISE, Xiamen University, China, 16-18 July 2007.*
34. Instrumental variable quantile estimation of spatial autoregressive Models (with Liangjun Su). *Contributed talk at the 1st World Conference of the Spatial Econometrics Association, University of Cambridge, 11-14 July 2007.*
35. A transformed random effects model with applications (with Jianhua Huang). *Contributed talk at The Third Symposium on Econometric Theory and Applications, Hong Kong University of Science and Technology, 13-15 April 2007.*
36. Quasi-maximum likelihood estimation for spatial panel data regressions. *Contributed talk at the Far Eastern Meeting of The Econometric Society 2006 (FEMES 2006), Tsinghua University, Beijing, China, July 10-12, 2006*.
37. QML Estimation of Dynamic Panel Data Models with Spatial Errors (with Liangjun Su). *Contributed talk at the Singapore Econometric Study Group (SESG) Meeting, Singapore Management University, 8 July 2006.*
38. Joint modeliing and testing for local and global spatial externalities. *Contributed talk at the International Workshop on Spatial Statistics and Econometrics, Luiss Business School, Rome, Italy, 25-27 May 2006.*
39. Discussion on "Externalities and the industry life cycle: A long-term perspective on regional growth in Great Britain, By F, M, H. Neffke, F. G., Van Oot, and R. A. Boschma". *Invited discussion at the International Workshop on Spatial Statistics and Econometrics, Luiss Business School, Rome, Italy, 25-27 May 2006.*
40. Quasi-maximum likelihood estimation for spatial panel data regressions. *Contributed talk at the Spatial Econometrics Workshop, Kiel Institute for World Economics, Kiel, Germany, 8-9 April 2005.*
41. Discussion on "A spatial error components model with both local and global externalities, by V. D. Giacinto". *Invited discussion at the Spatial Econometrics Workshop, Kiel Institute for World Economics, Kiel, Germany, 8-9 April 2005.*
42. Statistics with estimated parameters (with Y. K. Tse and Z. D. Bai). *Contributed talk at the 6th ICSA International Conference, 21-23 July 2004, Singapore.*
43. Modeling firm-size distribution using Box-Cox heteroscedastic regression (with Y. K. Tse). *Invited talk at the Department of Econometrics and Business Statistics, Monash University, 13 July 2004.*
44. Tests of functional form and heteroscedasticity (with Y. K. Tse). *Contributed paper at the Econometric Society Australasian Meeting (ESAM2004), Melbourne, 7-9 July 2004.*

45. On the asymptotic effect of substituting estimators for nuisance parameters in inferential statistics (with Y. K. Tse and Z. D. Bai). *Invited talk at the Department of Statistics, the Chinese University of Hong Kong, 28 April 2004.*
46. Score tests for inverse Gaussian mixture. *Contributed talk at the Bernoulli Society East Asian and Pacific Regional (EAPR) Conference 2003, Hong Kong, 18-20 December 2003.*
47. Simple inference methods based on Weibull to exponential transformation. *Invited paper at the 5th ICSA International Conference*, *Hong Kong, 16–19 August 2001.*
48. An *S*-chart based on an optimal normalizing transformation. *Invited paper at the International Conference on Statistics in the 21st Century, University of Maine, USA, 29 June - 1 July 2000.*
49. Predicting a future lifetime through Box-Cox transformation. *Invited paper at the 4th ICSA International Conference*, *Kunming, China, 19-21 August 1998.*
50. Box-Cox transformation and its role in Taguchi method. *Invited Paper at Industrial Statistics Workshop, National University of Singapore, 17 February 1997.*

RESEARCH GRANTS

(1) MOE AcRF Tier 3 (2025), Grant No. MOET32024-0006: "Role of Firm-to-Firm Input-Output Linkages in Transmitting Aggregate Shocks: Impacts on Firm-Level Productivity, Labor Demand, and Innovation", **Collaborator** (Lead PI: Pao-Li Chang).

(2) China State Administration of Foreign Experts Affairs (中国国家外国专家局) (2024), Grant No. H20240453: "Research on the operating efficiency, cross-border risk contagion and financial security of China's bond market under the high level financial opening environment", **Collaborator as Foreign Expert** (Lead PI: Weiping Zhang from Shandong University, China).

(3) China State Administration of Foreign Experts Affairs (中国国家外国专家局) (2024): Grant No. D20240131: "Research on the mechanism and risk prevention of digital intelligence technology enabling low-carbon transformation of traditional manufacturing industry in Northeast China", **Collaborator as Foreign Expert** (Lead PI: Jian WANG fron Northeastern University, China)

(4) MOE AcRF Tier 1 (2016), Grant No. C244/MSS16E003: "Inferences for Spatial Dynamic Panel Data Models with Applications", **PI**.

(5) MOE AcRF Tier 1 (2014), Grant No. C244/MSS14E002: "Joint Tests for Dynamic and Spatial Effects in Panel Data Models with Fixed Effects", **PI**.

(6) MOE AcRF Tier 1 (2013), Grant No. C244/MSS12E007: "Unified Estimation of Dynamic Models with Short Panels", **PI**.

(7) MOE AcRF Tier 1 (2011), Grant No. C244/MSS11E006: "Heteroscedasticity and Non-normality Robust LM Tests of Spatial Dependence", **PI**.

(8) MOE AcRF Tier 1 (2010), Grant No. C244/MSS10E007: "Tests of Spatial Effects based on Bootstrapped Critical Values", **PI**.

(9) MOE AcRF Tier 1 (2009), Grant No. C244/MSS9E005: "Bias-Corrected Estimation for Spatial Autocorrelation", **PI**.

(10) MOE AcRF Tier 1 (2008), Grant No. C244/MSS8E010: "Robust LM Tests for Spatial Error Dependence" **PI**.

(11) MOE AcRF Tier 1 (2007), Grant No. C244/MSS7E005: “Bootstrap Estimate of Variance-Covariance Matrix for Box-Cox Type Panel Data Models” **PI**.

(12) MOE AcRF Tier 1 (2006), Grant No. 06-C208-SMU-029: “Quantile Regression with Flexible Functional Form Transformations” **PI**.

(13) MOE AcRF Tier 1 (2005), Grant No. C208/MSS5E013: “On Joint Modelling and Testing for Local and Global Spatial Externalities Based on Panel Data” **PI**.

(14) MOE AcRF Tier 1 (2004), Grant No. C208/MSS4E013: “Bounds on Event Probabilities for Duration and Lifetime Models”, **PI**.

(15) Wharton-SMU Research Center Research (2004), Grant No. C208/MS63E046: “Analysis of Price, Price Dispersion and Market Dynamics in Online Markets Using Panel Data”, **PI**.

(16) MOE AcRF Tier 1 (2004), Grant No. C208/MSS3E110: “Functional Panel Data Regression with Spatial Error Correlation”, **PI**.

(17) MOE AcRF Tier 1 (2003), Grant No. C208/MSS3E048: “Data Transformation and High-Frequency Data: Some Issues in Econometric and Financial Modeling”, **PI**.

(18) “Time Series Analysis to Determine the Inter-relationship between Vectorial, Environmental and Epidemiological Factors in the Transmission of Dengue for the Formulation of Forecasting Models”, Ministry of Environment, Singapore, 2001-2002, **Collaborator**.

(19) “Reliability Analysis by using Degradation Data” (with Z. H. Chen as PI). National University of Singapore, 2001–2003, **Collaborator**.

(20) “Extended Linear Modelling for Survival and Economic Data” (with Y. K. N. Truong as PI), National University of Singapore, 1998–2001, **Collaborator**.

THESES AND DISSERTATIONS

Theses and Dissertations Supervised

- Supervisor, "Externalities in Housing Market and Agglomeration Economics", Dissertation by **Yifan WU**, PhD in Economics, Singapore Management University, 2022.
- Supervisor, "Spatial Panel Data Models: Unbalanced Panels, Threshold Effects and Network Effects", Dissertation by **Xiaoyu Meng**, PhD in Economics, Singapore Management University, 2022.
- Supervisor, "Spatial Panel Data Models with Temporal Heterogeneity", Dissertation by **Yuhong XU**, PhD in Economics, Singapore Management University, 2020.
- Supervisor, "Spatial Dynamic Panel Data Models with Small T", Dissertation by **Liyao LI**, PhD in Economics, Singapore Management University, 2019.
- Supervisor, "On Refined and Robust Inferences for Spatial Regression Models", Dissertation by **Shew Fan LIU**, PhD in Economics, Singapore Management University, 2016.
- Supervisor, “Effect of Estimation and Transformation on Control Charts”, Thesis by **Wanhua SU**, Master in Statistics, National University of Singapore, 2002.
- Supervisor, “Data Transformation in the Analysis of Lifetime Data”, Thesis by **Jianfeng XU**, Master in Statistics, National University of Singapore, 2002.

- Supervisor, “Simple Prediction Intervals for the Weibull Distribution”, Thesis by **Peen Peen SEE**, Master in Statistics, National University of Singapore, 2000.

Theses and Dissertations Assessed

- Committee Member, “Essays on Estimation Firm-Level Production Functions with Spatial Dependence”, Dissertation by Ng Bo Lin, PhD in Economics, Singapore Management University, 2024.
- External Examiner, “Peer Effects and Individual Decision Making Based on Village Network”, Dissertation by Chuanmin Zhao, PhD in Economics, Antai College of Economics and Management, Shanghai Jiaotong University, 2022.
- External Examiner, “Dimensional Extensions of Spatial Dependence: Applications in China”, Dissertation by Juncong Guo, PhD in Economics, Antai College of Economics and Management, Shanghai Jiaotong University, 2021.
- External Examiner, “Cross-Sectional Dependence in Heterogeneous Panels: Estimation, Inference and Forecasting”, Dissertation by Oguzhan Okgun, PhD in Economics, University Paris II Pantheon-Assas, France, 2019.
- External Examiner, “Applied Spatial Econometrics for Real Estate Economics”, PhD QE Oral Examination, Real Estate, National University of Singapore, 2019.
- Committee Member, "Essays on High-frequency Financial Econometrics", Dissertation by Shouwei LIU, PhD in Economics, Singapore Management University, 2014.
- External Examiner, “Rank Inferences for the Accelerated Failure Time Models”, Dissertation by Zhou Fang, PhD in Statistics, Dept. of Statistics and Applied Probability, National University of Singapore, 2014.
- External Examiner, “Modified Weibull Distribution in Reliability Engineering”, Dissertation by Hong Jiang, PhD in Industrial and System Engineering, National University of Singapore, 2009.
- External Examiner, “Linear Regression Parameter Estimation Methods for the Weibull Distribution”, Dissertation by Lifang Zhang, PhD in Industrial and System Engineering, National University of Singapore, 2008.
- External Examiner, “Electricity spot price and volatility modelling in the Australian national electricity market”, Dissertation by Xuebing Lu, PhD in Economics, Monash University, Clayton, Australia, 2007.
- External Examiner, “Statistical Control Charts for Automated and High-Quality Manufacturing Process”, Dissertation by Xiaosheng Lu, PhD in Industrial and System Engineering, National University of Singapore, 1998.
- Examiners or External Examiners for a number of Master Thesis.

CONTACT INFORMATION

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