

ZHENLIN YANG

Professor of Economics & Statistics

[School of Economics](#)

[Singapore Management University](#)

DEGREES

- 1992 Ph.D., Statistics, University of Alberta, Canada.
- 1987 M.Sc., Applied Statistics, University of Guelph, Canada.
- 1983 B.Eng., Metal Materials, Northeastern University, China.

RESEARCH INTERESTS

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

EDITORIAL 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: [Journal of Spatial Econometrics](#), Jan. 2019 – Present.

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] Baltagi, B. H., Deng, Y., Li, J., and Yang, Z. L. (2022). Cities in a pandemic: evidence from China. *Journal of Regional Science*. Accepted.
- [2] 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. <https://doi.org/10.1016/j.econmod.2021.105597>
- [3] Baltagi, B. H., Piroette, A. and Yang, Z. L. (2021). Diagnostic tests for homoscedasticity in spatial cross-sectional or panel models. *Journal of Econometrics* 224, 245-270.
- [4] 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.
- [5] Li, L. Y. and Yang, Z. L. (2021). Spatial dynamic panel data models with correlated random effects. *Journal of Econometrics* 221, 424-454.
- [6] 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.
- [7] 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.
- [8] 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.
- [9] Yang, Z. L. (2019). Editorial introduction to the special issue entitled: Spatial econometrics: New methods and applications. *Regional Science and Urban Economics* 76, 1.
- [10] Yang, Z. L. (2018). Bootstrap LM tests for higher order spatial effects in spatial linear regression models. *Empirical Economics* 55, 35–68.
- [11] 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.
- [12] Yang, Z. L. (2018). Unified M-estimation of fixed-effects spatial dynamic models with short panels. *Journal of Econometrics* 205, 423-446.
- [13] Su, L. J. and Yang, Z. L. (2018). Asymptotics and bootstrap for random-effects panel data transformation models. *Econometric Reviews* 37, 602-625.
- [14] Shen, Y. and Yang, Z. L. (2017). Improved likelihood inferences for Weibull regression model. *Journal of Statistical Computation and Simulation* 87, 2349-2371.

- [15] 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.
- [16] 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.
- [17] Liu, S. F. and Yang, Z. L. (2015). Improved Inferences for spatial regression models. ***Regional Science and Urban Economics*** **55**, 55-67.
- [18] 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.
- [19] 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.
- [20] Yang, Z. L. (2015). LM tests of spatial dependence based on bootstrap critical values. ***Journal of Econometrics*** **185**, 33-39.
- [21] Su, L. J. and Yang, Z. L. (2015). QML estimation of dynamic panel models with spatial errors. ***Journal of Econometrics*** **185**, 230-258.
- [22] 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.
- [23] Shen, Y. and Yang, Z. L. (2015). Bias-correction for Weibull common shape estimation. ***Journal of Statistical Computation and Simulation*** **85**, 3017-3046.
- [24] 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.
- [25] 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.
- [26] Desmond, A. F. and Yang, Z. L. (2011). Score tests for inverse Gaussian mixture. ***Applied Stochastic Models in Business and Industry*** **27**, 633-648.
- [27] 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.
- [28] 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***
- [29] Yang, Z. L. (2010). A robust LM test for spatial error components. ***Regional Science and Urban Economics*** **40**, 299-310.
- [30] Yang, Z. L. and Tse, Y. K. (2008). Generalized LM tests for functional form and heteroscedasticity. ***Econometrics Journal***, **11** 349-376.
- [31] 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.
- [32] 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.

- [33] 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.
- [34] Yang, Z. L., Tse, Y. K. and Bai, Z. D. (2007). Statistics with estimated parameters. ***Statistica Sinica* 17**, 817-837.
- [35] 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.
- [36] 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.
- [37] Yang, Z. L. (2006). A modified family of power transformations. ***Economics Letters*, 92**, 14-19.
- [38] 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.
- [39] Yang, Z. L. Li, C. W. and Tse, Y. K. (2006). Functional form and spatial dependence in dynamic panels. ***Economics Letters* 91**, 138-145.
- [40] 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.
- [41] 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.
- [42] 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.
- [43] Yang Z. L. and Chen, G. (2004). Tests of transformation in nonlinear regression. ***Economics Letters* 84**, 391-398.
- [44] 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.
- [45] 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.
- [46] Yang, Z. L. and Abeysinghe, T. (2003). A score test for Box-Cox functional form. ***Economics Letters* 79**, 107-115.
- [47] 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.
- [48] 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.
- [49] Yang, Z. L. and Abeysinghe, T. (2002). An explicit variance formula for the Box-Cox functional form estimator. ***Economics Letters*, 76**, 259-265.
- [50] 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.

- [51] Yang, Z. L. (2002). Median estimation through a regression transformation. **Canadian Journal of Statistics** **30**, 235-242.
- [52] 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.
- [53] 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.
- [54] Yang, Z. L. (2001). Predicting a future median life through a power transformation. **Lifetime Data Analysis** **7**, 305-317.
- [55] 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.
- [56] 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.
- [57] 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.
- [58] Yang, Z. L. (2000). Predictive densities for the lognormal distribution and their applications. **Microelectronics Reliability** **40**, 1051-1059.
- [59] Yang, Z. L. (2000). A new statistics for regression transformation. **Test** **9**, 123-132.
- [60] 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.
- [61] Yang, Z. L. (1999). Predicting a future lifetime through Box-Cox transformation. **Lifetime Data Analysis** **5**, 265-279.
- [62] Yang, Z. L. (1999). Estimating transformation and its effects on Box-Cox T -ratio. **Test** **8**, 167-190.
- [63] Yang, Z. L. (1998). An alternative approximation to the variance of transformation Score. **Journal of Statistical Computation and Simulation** **62**, 181-188.
- [64] 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.
- [65] Yang, Z. L. (1998). On robustness of usual confidence region under transformation misspecification. **Journal of Statistical Computation and Simulation** **61**, 175-190.
- [66] Hooper, P. M. and Yang, Z. L. (1997). Confidence intervals following Box-Cox transformation. **Canadian Journal of Statistics** **25**, 401-416.
- [67] Yang, Z. L. (1997). More on the estimation of Box-Cox transformation. **Communications in Statistics, Simulation and Computation** **26**, 1063-1074.
- [68] Yang, Z. L. (1996). Some asymptotic results on Box-Cox transformation methodology. **Communications in Statistics, Theory and Methods** **25**, 403-415.
- [69] 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. (2022). Unbalanced spatial panel data models with fixed effects. Under review.
- [2] Li, L. Y. and Yang, Z. L. (2022). Dynamic spatial panel data models with interactive fixed effects: M-estimation and inference with fixed T . Under review.
- [3] Akgun, O., Pirotte, A., Urga, G. and Yang, Z. L. (2022). Equal predictive ability tests based on panel data with applications to OECD and IMF forecasts. Under review.

Works in Progress

- [1] Liu, S. F. and Yang, Z. L. (2021). Heteroskedasticity robust estimation and testing for higher-order spatial autoregressive models.
- [2] Xu, Y. H. and Yang, Z. L. (2021). Adjusted quasi score estimation of spatial panel data models with time-varying coefficients.
- [3] Xu, Y. H. and Yang, Z. L. (2021). Heteroskedasticity robust estimation of spatial panel data models with temporal heterogeneity.
- [4] Yang, Z. L. (2021). Initial condition free and heteroskedasticity robust estimation and inferences for dynamic panel data models.
- [5] Wu, Y. F. and Yang, Z. L. (2021). Analysis of large real estate prices data: a high-order spatiotemporal autoregression approach.
- [6] Desmond, A. F. and Yang, Z. L. (2021). Confidence limits for cure rates in first hitting time regression models.
- [7] Meng, X. Y. and Yang, Z. L. (2021a). Threshold spatial panel data models with fixed effects.
- [8] Meng, X. Y. and Yang, Z. L. (2021b). Spatial panel data models with time-varying network structure.
- [9] Yang, Z. L. (2018a). Robust VC matrix estimation for spatial panel data models with error components.
- [10] Yang, Z. L. (2018b). An alternative formulation for efficient GMM estimation: applications in spatial econometric models.
- [11] Yang, Z. L. (2018c). Quasi score based estimation for spatial autoregressive models with endogenous regressors.

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, 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. 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.*
2. Robust estimation of spatial panel data models with temporal time varying coefficients. *Invited talk at WISE, Xiamen University, China, July 16, 2021.*
3. Unbalanced panel data models with fixed effects. *Invited talk at WISE, Xiamen University, China, July 12, 2021.*
4. Spatial dynamic panel data models with small T : theory and applications. *Invited talk at University of Illinois at Urbana-Champaign, US, Nov. 22, 2019.*
5. 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**
6. 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.*
7. 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.*
8. Specification tests for time-heterogeneity in spatial panel data models with fixed effects. *Invited Talk at the Tohoku University, Japan, Dec. 20, 2018.*
9. 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.**
10. Diagnostic tests for homoscedasticity in spatial cross-sectional or panel models. *Invited Talk at the Audit University, Nanjing, China, Nov. 16, 2018.*
11. 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.**
12. Bootstrap LM tests for higher order spatial effects in spatial linear regression models. *Invited talk at Northeastern University, Shenyang, China, 11 Oct., 2017.*
13. 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.*
14. 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.*

15. Unified M-estimation of fixed effects spatial dynamic models with short panels. *Invited talk at Northeastern University, Shenyang, China, Dec. 12, 2016.*
16. 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.*
17. 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.*
18. LM tests of spatial dependence based on bootstrap critical values. *Invited talk at University of Guelph, Canada, 22 October 2014.*
19. A simple and robust method of inference for spatial Autocorrelation. *Invited Seminar at the Division of Economics, Nanyang Technological University, Singapore, 3 November 2010.*
20. 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 of Professor Bai Zhidong on his 65th Birthday, 20 July 2008*
21. 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.*
22. Asymptotics and Bootstrap for Transformed Panel Data Regressions. *Invited talk at the Department of Statistics, Korea University, 18 May 2007.*
23. A Transformed Random Effects Model with Applications (with Jianhua Huang). *Invited talk at the Division of Economics, Nanyang Technological University, Singapore, 31 January 2007.*

CONFERENCE PRESENTATIONS & DISCUSSIONS

1. 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.*
2. 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.*
3. 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.*
4. 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.*
5. 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.*
6. 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.*

7. 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.*
8. 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.*
9. 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.*
10. 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.*
11. 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.*
12. 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).*
13. Improved Inferences for Spatial Regression Models. *Contributed talk at the 14th International Workshop on Spatial Econometrics and Statistics, Paris, 27-28 May 2015.*
14. 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.*
15. 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.*
16. Unified QML estimation of dynamic models with short panels. *Contributed talk at the Asia Meeting of the Econometric Society, Singapore, 2-4 August 2013.*
17. QML estimation of dynamic panel data models with spatial errors. *Contributed talk at the 18th International Panel Data Conference, Paris, 5-6 July 2012.*
18. LM tests of spatial dependence based on bootstrap critical values. *Contributed talk at Tsinghua International Conference for Econometrics, Beijing, 15-16 May 2012.*
19. A general method for third-order bias and variance corrections for a nonlinear parameter. *Contributed talk at SETA 2012, Shanghai, 19-21 May 2012.*
20. 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.*
21. 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.*
22. 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.*
23. Bias-corrected estimation for spatial autocorrelation. *Contributed talk at the IVth World Conference of the Spatial Econometrics Association, Chicago, 9-12 June 2010.*

24. 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.
25. Bias-corrected estimation for spatial autocorrelation. *Invited Seminar at the School of Economics, Singapore Management University, 23 October 2009.*
26. 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.*
27. 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.
28. 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.*
29. 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.*
30. 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.*
31. 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.*
32. 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.*
33. Joint Modelling 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.*
34. 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.*
35. 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.*
36. 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.*
37. 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.*
38. 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.*
39. Tests of functional form and heteroscedasticity (with Y. K. Tse). *Contributed paper at the Econometric Society Australasian Meeting (ESAM2004), Melbourne, 7-9 July 2004.*

40. 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.*
41. 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.*
42. Simple inference methods based on Weibull to exponential transformation. *Invited paper at the 5th ICSA International Conference, Hong Kong, 16–19 August 2001.*
43. 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.*
44. Predicting a future lifetime through Box-Cox transformation. *Invited paper at the 4th ICSA International Conference, Kunming, China, 19-21 August 1998.*
45. 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) Inferences for Spatial Dynamic Panel Data Models with Applications. Singapore Management University, 01.10.2016–28.02.2020.
- (2) Joint Tests for Dynamic and Spatial Effects in Panel Data Models with Fixed Effects. Singapore Management University, 08/2014–07/2015.
- (3) Unified Estimation of Dynamic Models with Short Panels. Singapore Management University, 03/2013–02/2014.
- (4) Heteroscedasticity and Non-normality Robust LM Tests of Spatial Dependence. Singapore Management University, 11/2011–12/2012.
- (5) Tests of Spatial Effects based on Bootstrapped Critical Values. Singapore Management University, 11/2010–10/2011.
- (6) Bias-Corrected Estimation for Spatial Autocorrelation. Singapore Management University, 11/2009–10/2010.
- (7) Robust LM Tests for Spatial Error Dependence. Singapore Management University, 03/2008–10/2009.
- (8) Bootstrap Estimate of Variance-Covariance Matrix for Box-Cox Type Panel Data Models. Singapore Management University, 11/2007–02/2008.
- (9) Quantile Regression with Flexible Functional Form Transformations. Singapore Management University, 10/2006–09/2007.
- (10) On Joint Modelling and Testing for Local and Global Spatial Externalities Based on Panel Data. Singapore Management University, 10/2005-09/2006.
- (11) Bounds on Event Probabilities for Duration and Lifetime Models. Singapore Management University, 10/2004–09/2005.
- (12) Analysis of Price, Price Dispersion and Market Dynamics in Online Markets Using Panel Data (with J. H. Huang). Wharton-SMU Research Center, Singapore Management University, 01/2004–31/2004.
- (13) Functional Panel Data Regression with Spatial Error Correlation (with T. S. Tse). Singapore Management University, 01/2004-12/2004.

- (14) Data Transformation and High-Frequency Data: Some Issues in Econometric and Financial Modeling (with T. S. Tse). Singapore Management University, 01/2003–12/2003.
- (15) 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.
- (16) Extended Linear Modelling for Survival and Economic Data (with Biman Chakraborty and Y. K. N. Truong). National University of Singapore, 1998–2001.
- (17) Reliability Analysis by using Degradation Data (with Z. H. Chen). National University of Singapore, 2001–2003.

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