

# Jialiang Li

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## EDUCATION

**Ph.D.** Statistics, University of Wisconsin, Madison 2006.  
**M.S.** Population Health Sciences, University of Wisconsin, Madison 2005.  
**B.S.** Statistics, University of Science and Technology of China 2001.

## EMPLOYMENT HISTORY

2021/07-present, Professor, Department of Statistics and Data Science, Faculty of Science, National University of Singapore.  
2012/01-2021/06, Associate Professor, Department of Statistics and Applied Probability, Faculty of Science, National University of Singapore.  
2018/07-2021/06, Deputy Head, Department of Statistics and Applied Probability, Faculty of Science, National University of Singapore.  
2006/07-2011/12 Assistant Professor, Department of Statistics and Applied Probability, Faculty of Science, National University of Singapore.  
2021/07-present, Professor, Duke University-NUS Graduate Medical School.  
2012/01-2021/06, Associate Professor, Duke University-NUS Graduate Medical School.  
2008/07-2011/12 Assistant Professor, Duke University-NUS Graduate Medical School.  
2008/07-2017/06, Adjunct Research Scientist, Singapore Eye Research Institute.  
2017/06-2020/06, Adjunct Principal Investigator, Singapore Eye Research Institute.  
2017/03-present, Research Associate, Centre for Family and Population Research, Faculty of Arts and Social Sciences, National University of Singapore.

## CURRENT RESEARCH INTERESTS

Change point; Classification; Cluster analysis; Clinical trials; Diagnostic medicine; Empirical processes; Epidemiology; Factor model; Functional and longitudinal data; High-dimensional data; Nonparametric and semiparametric model; Instrumental variable; Machine learning; Meta-analysis; Model average; Model selection; Network data; Personalized medicine; Screening; Statistical learning; Structural equation model; Survival analysis; Time series; Threshold regression.

## AWARDS

2009 New Investigator Grant (NIG) Award, National Medical Research Council.  
2011 Young Scientist Award, National University of Singapore.  
2012 Cooperative Basic Research Grant (CBRG) Award, National Medical Research Council.  
2018 Ministry of Education (MOE) Tier 2 Funding Grant Award, Singapore.  
2019 Elected Member of International Statistical Institute (ISI).  
2020 Fellow of American Statistical Association (ASA).  
2022 Fellow of Institute of Mathematical Statistics (IMS).

## PUBLICATIONS

### Statistical Journal Publications

1. **Li, J.** and Fine, J. P. (2004): On sample size for sensitivity and specificity in prospective diagnostic accuracy studies. *Statistics in Medicine*. 23 (16): 2537—2550.
2. **Li, J.**, Fine, J. P. and Safdar, N. (2007): Prevalence dependent diagnostic accuracy measures. *Statistics in Medicine*. 26 (17): 3258—3273.
3. **Li, J.**, Zhang, C. M., Nordheim, E. V. and Lehner, C. E. (2008): On the multivariate predictive distribution of multi-dimensional effective dose: a Bayesian approach. *Journal of Statistical Computation and Simulation*. 78 (5): 429—442.
4. **Li, J.**, Nordheim, E. V., Zhang, C. M. and Lehner, C. E. (2008): Estimation and confidence regions of multi-dimensional effective dose. *Biometrical Journal*. 50 (1): 110—122.
5. **Li, J.** and Fine, J. P. (2008): ROC analysis with multiple tests and multiple classes: methodology and applications in microarray studies. *Biostatistics*. 9 (3): 566—576.

6. Zhang, C. M., **Li, J.** and Meng, J. (2008). On Stein's lemma, dependent covariates and functional monotonicity in multi-dimensional modeling. *Journal of Multivariate Analysis*. 99: 2285—2303.
7. **Li, J.**, Gray, B. R., and Bates, D. M. (2008). An empirical study of statistical properties of variance partition coefficients for multi-level logistic regression models. *Communications in Statistics - Simulation and Computation*. 37 (10): 2010—2026.
8. **Li, J.** and Palta, M. (2009). Bandwidth selection through cross validation for semi-parametric varying-coefficient partially linear models. *Journal of Statistical Computation and Simulation*. 79(11): 1277—1286.
9. **Li, J.**, Tai, B. C., and Nott, D. J. (2009). Confidence interval for the bootstrap P-value and sample size calculation of the bootstrap test. *Journal of Nonparametric Statistics*. 21(5): 649—661.
10. **Li, J.** (2009). Semiparametric residuals and analysis for a scleroderma clinical trial. *Communications in Statistics – Theory and Methods*. 38 (18): 3339—3350.
11. **Li, J.**, Xia, Y., Palta, M., and Shankar, A. (2009). Impact of unknown covariance structures in semiparametric models for longitudinal data: an application to Wisconsin diabetes data. *Computational Statistics and Data Analysis*. 53: 4186—4197.
12. **Li, J.**, and Zhou, X. H. (2009). Nonparametric and semiparametric estimation of the three way receiver operating characteristic surface. *Journal of Statistical Planning and Inference*. 139: 4133—4142.
13. **Li, J.** and Wong, W. K. (2009). A semi-parametric analysis for identifying scleroderma patients responsive to an anti-fibrotic agent. *Contemporary Clinical Trials*. 30 (2): 105--113.
14. **Li, J.** and Wong, W. K. (2010). Selection of covariance patterns for longitudinal data in semi-parametric models. *Statistical Methods in Medical Research*. 19: 183—196.
15. **Li, J.**, Zhang C. M., Doksum, K. A., and Nordheim, E. V. (2010). Simultaneous confidence intervals for semiparametric logistic regression and confidence regions for the multi-dimensional effective dose. *Statistica Sinica*. 20 (2): 637—659.
16. David J. Nott and **Li J.** (2010). A sign based loss approach to model selection in nonparametric regression. *Statistics and Computing*. 20 (4): 485—498.
17. **Li, J.** and Ma, S. (2010). Interval-censored data with repeated measurements and a cured subgroup. *Journal of the Royal Statistical Society Series C (Applied Statistics)*. 59 (4): 693—705.
18. **Li, J.** and Fine, J. P. (2010). Weighted area under the receiver operating characteristic curve and its application to gene selection. *Journal of the Royal Statistical Society Series C (Applied Statistics)*. 59 (4): 673—692.
19. Zhang, W. and **Li, J.** (2010). Discussion to “Maximum likelihood estimation of a multi-dimensional log-concave density” by Cule, Samworth and Stewart. *Journal of the Royal Statistical Society Series B*. 72 (5): 579—580.
20. **Li, J.** and Wong, W. K. (2011). Two-dimensional toxic dose and multivariate logistic regression, with application to decompression sickness. *Biostatistics*. 12(1): 143—155.
21. Zhang, Y. [PHD student] and **Li, J.** (2011). Combining multiple markers for multi-category classification: an ROC surface approach. *Australian & New Zealand Journal of Statistics*. 53(1): 63—78.

22. **Li, J.** and Lee, M.-L. T. (2011). Analysis of failure time using threshold regression with semi-parametric varying coefficients. *Statistica Neerlandica*. 65(2): 164—182.
23. **Li, J.**, Zhang, W. and Wu, Z. (2011). Optimal zone for bandwidth selection in semiparametric models. *Journal of Nonparametric Statistics*. 23(3): 701—717.
24. **Li, J.** and Ma, S. (2011). Time-dependent ROC analysis under diverse censoring patterns. *Statistics in Medicine*. 30 (11): 1266—1277.
25. **Li, J.** and Zhang, W. (2011). A semiparametric threshold model for censored longitudinal data analysis. *Journal of the American Statistical Association*. 106(494): 685-696.
26. Nott, D. J., Fielding, M. and **Li, J.** (2011). Importance sampling as a variational approximation. *Statistics and Probability Letters*. 81(8): 1052—1055.
27. **Li, J.** and Fine, J. P. (2011). Assessing the dependence of sensitivity and specificity on prevalence in meta-analysis. *Biostatistics*. 12(4): 710-722.
28. **Li, J.** (2012). Applications of the bootstrap in ROC analysis. *Communication in Statistics - Simulation and Computation*. 41(6): 865-877.
29. Tang, M. L., Pei, Y. B., Wong, W. K., **Li, J. L.** (2012). Goodness-of-fit tests for correlated paired binary data. *Statistical Methods in Medical Research*. 21(4): 331-345.
30. Sun, Y., **Li, J.** and Zhang, W. (2012). Estimation and model selection in a class of semiparametric models for cluster data. *Annals of the Institute of Statistical Mathematics*. 64:835-856.
31. **Li, J.**, Zhou, X. H. and Fine, J. P. (2012). A regression approach to ROC surfaces, with applications to Alzheimer’s disease. *Science China Mathematics*. 55(8):1583-1595.
32. **Li, J.**, Jiang, B. and Fine, J. P. (2013). Multicategory reclassification statistics for assessing Improvements in diagnostic accuracy. *Biostatistics*. 14(2): 382—394.
33. **Li, J.**, Jiang, B., and Fine, J. P. (2013). Letter to Editor: Response. *Biostatistics*. 14(4): 809-810.
34. Kuk, A. Y. C., **Li, J.** and Rush, J. A. (2014). Variable and threshold selection to control predictive accuracy in logistic regression. *Journal of the Royal Statistical Society Series C (Applied Statistics)*. 63: 657-672.
35. Shao, F. [PhD student], **Li, J.**, Ma, S. and Lee, M.-L.T. (2014). Semiparametric Varying-coefficient Model for Interval Censored Data with a Cured proportion. *Statistics in Medicine*. 33(10): 1700—1712.
36. Shi, H., Cheng, Y., and **Li, J.** (2014). Assessing diagnostic accuracy improvement for competing-risk censored outcomes. *The Canadian Journal of Statistics*. 42(1): 109—125.
37. Salim, A., Ma, X., **Li, J.**, Reilly, M. (2014). A maximum likelihood method for secondary analysis of nested case-control data. *Statistics in Medicine*. 33(11):1842-52.
38. Cheng, M.Y., Honda, T., **Li, J.**, Peng, H. (2014). Nonparametric independence screening and structural identification for ultra-high dimensional longitudinal data. *The Annals of Statistics*. 42(5): 1819—1849.
39. Zhipeng Huang [PhD student], **Jialiang Li**, David Nott, Lei Feng, Tze-Pin Ng and Tien-Yin Wong (2015). Bayesian Estimation of Varying-coefficient Models with Missing Data, with Application to the Singapore Longitudinal Aging Study. *Journal of Statistical Computation and Simulation*. 85(12):2364-2377.
40. **Li, J.**, Fine, J. and Brookhart, A. (2015). Instrumental variable additive hazards models. *Biometrics*. 71: 122—130.

41. Cheng, Y. and **Li, J.** (2015). Time-dependent Diagnostic Accuracy Analysis with Censored Outcome and Censored Predictor. *Journal of Statistical Planning and Inference*. 156: 90—102.
42. Sultana, M.P. [PhD student], **Li, J.**, Hu, J. (2015). Comparison of Three Dimensional ROC Surfaces for Clustered and Correlated Markers, with a Proteomics Application. *Statistica Neerlandica*. 69(4): 399—418.
43. Fang, X. [PhD student], **Li, J.**, Wong, W. K., and Fu, B. (2016). Detecting the Violation of Variance Homogeneity in Mixed Models: a Case Study. *Statistical Methods in Medical Research*. 25(6): 2506-2520.
44. **Li, J.**, Huang, Z., Ma, S., Lee, M.L.T. (2016). Collective versus Individual Effects in Survival Analysis of Multiple Failures. *Scandinavian Journal of Statistics*. 43(2): 543-557.
45. Cheng, M., Honda, T., **Li, J.** (2016). Efficient estimation in semivarying coefficient models for longitudinal/clustered data. *The Annals of Statistics*. 44(5): 1988-2017.
46. Ke, Y., **Li, J.**, Zhang, W. (2016). Structure Identification in Panel Data Analysis. *The Annals of Statistics*. 44(3): 1193-1233.
47. Yu, T., **Li, J.**, Ma, S. (2017). Accounting for Clinical Covariates and their Interactions with Genomic Biomarkers in ROC Analysis. *Communications in Statistics - Simulation and Computation*. 46(5): 3735-3755.
48. Xia, X., Jiang, B., **Li, J.**, Zhang, W. (2016). Low-dimensional Confounder Adjustment and High-dimensional Penalized Estimation for Survival Analysis. *Lifetime Data Analysis*, 22(4): 547-569.
49. Huang, Z. [PhD student], **Li, J.**, Cheng, C.Y., Cheung, C., Wong, T.Y. (2016). Bayesian reclassification statistics for assessing improvements in diagnostic accuracy. *Statistics in Medicine*, 35(15): 2574-2592.
50. **Li, J.**, Zheng, Q., Peng, L., Huang, Z. (2016). Survival impact index and ultrahigh-dimensional model-free screening with survival outcomes. *Biometrics*, 72(4): 1145-1154.
51. **Li, J.**, Huang, C., Zhu, H. (2017). A Functional Varying-Coefficient Single Index Model for Functional Response Data. *Journal of the American Statistical Association (T&M)*. 112: 1169-1181.
52. Xia, X., Yang, H., **Li, J.** (2016). Feature screening for generalized varying coefficient models with application to dichotomous responses. *Computational Statistics and Data Analysis*. 102:85-97.
53. Cao, H., **Li, J.**, Fine, J. (2016). On last observation carried forward and asynchronous longitudinal regression analysis. *Electronic Journal of Statistics*. 10(1): 1155-1180.
54. **Li, J.**, Feng, Q., Fine, J.P., Pencina, M.J., Van Calster, B. (2018). Nonparametric estimation and inference for polytomous discrimination index. *Statistical Methods in Medical Research*. 27(10): 3092—3103.
55. Chen, D. [PhD student], **Li, J.**, Chong, J.K. (2017). Hazards Regression for Freemium Products and Services: a Competing Risks Approach. *Journal of Statistical Computation and Simulation*. 87(9): 1863-1876.
56. **Li, J.**, Fine, J.P., Pencina, M.J. (2017). Multi-category Diagnostic Accuracy based on Logistic Regression. *Statistical Theory and Related Fields*. 1(2):143-158.

57. Xu, M. [PhD Student], **Li, J.**, Chen, Y. (2017). Varying coefficient functional autoregressive model with application to the US Treasuries. *Journal of Multivariate Analysis*. 159: 168-183.
58. Yue, M. [PhD Student], **Li, J.** (2017). Improvement Screening for Ultra-High Dimensional Data with Censored Survival Outcomes and Varying Coefficients. *International Journal of Biostatistics*. 13(1): 16.
59. **Li, J.**, Jin, B. (2018). Multi-threshold Accelerated Failure Time Model. *Annals of Statistics*. 46: 2657-2682.
60. Xia, X., **Li, J.**, Fu, B. (2019). Conditional quantile correlation learning for ultrahigh dimensional varying coefficient models and its application in survival analysis. *Statistica Sinica*. 29: 645-669.
61. Jiang, B., **Li, J.** (2018). Sample size determination for high dimensional parameter estimation with application to biomarker identification. *Computational Statistics and Data Analysis*. 118: 54—65.
62. Huang, T., **Li, J.** (2018). Semiparametric Model Average Prediction in Panel Data Analysis. *Journal of Nonparametric Statistics*. 30(1):1—20.
63. Yue, M. [PhD Student], **Li, J.**, Ma, S. (2018). Sparse Boosting for High-Dimensional Survival Data with Varying Coefficients. *Statistics in Medicine*. 37(5): 789-800.
64. Jiang, B., **Li, J.**, Fine, J. (2018). On 2-Step Residual Inclusion Estimator for Instrument Variable Additive Hazards Model. *Biostatistics & Epidemiology*. 2(1): 47-60.
65. Fang, F., **Li, J.**, Wang, J. [PhD student] (2019). Optimal model averaging estimation for correlation structure in generalized estimating equations. *Communications in Statistics - Simulation and Computation*. 48(5):1574-1593.
66. **Li, J.**, Xia, X., Wong, W., Nott, D. (2018). Varying-coefficient semiparametric model averaging prediction. *Biometrics*. 74(4), 1417–1426.
67. Wang, J. [PhD student], **Li, J.** (2018). Semiparametric Model Averaging Prediction: a Bayesian Approach. *Australian & New Zealand Journal of Statistics*. 60(4):407-422.
68. **Li, J.**, Zhang, W., Kong, E. (2018). Factor Models for Asset Returns Based on Transformed Factors. *The Journal of Econometrics*. 207(2): 432-448.
69. Yue, M. [PhD student], **Li, J.**, Cheng, M. Y. (2019). Two-step Sparse Boosting for High-Dimensional Longitudinal Data with Varying Coefficients. *Computational Statistics and Data Analysis*. 131: 222—234.
70. Jiang, B., Song, R., **Li, J.**, Zeng, D. (2019). Entropy learning for dynamic treatment regimes (with discussion). *Statistica Sinica*. 29:1633-1710.
71. Huang, L., **Li, J.** (2019). Weighted Volume Under the Three-way Receiver Operating Characteristic Surface. *Statistical Methods in Medical Research*. 28(12) 3627—3648.
72. **Li, J.**, Gao, M., D’Agostino, R. (2019). Evaluating Classification Accuracy for Modern Learning Approaches. *Statistics in Medicine (Tutorials in Biostatistics)*. 38(13): 2477-2503.
73. Wang, J. [PhD student], **Li, J.**, Li, Y., Wong, W.K. (2019). A model-based multi-threshold method for subgroup identification. *Statistics in Medicine*. 38(14): 2605-2631.
74. **Li, J.** and Wong, W.K. (2019). Discussion to “Covariate-assisted ranking and screening for largescale two-sample inference” by Cai, Sun and Wang. *Journal of the Royal Statistical Society Series B*. 81(2): 227.

75. Li, J., Yue, M., Zhang, W. (2019). Subgroup Identification via Homogeneity Pursuit for Dense Longitudinal/Spatial Data. *Statistics in Medicine*. 38(17): 3256-3271.
76. Xia, X and Li, J (2021). Copula-based Partial Correlation Screening: a Joint and Robust Approach. *Statistica Sinica*. 31, 421-447.
77. Yang, J., Kuan, P.F., Li, J. (2020). Non-monotone Transformation of Biomarkers to Improve Diagnostic and Screening Accuracy in a DNA Methylation Study with Trichotomous Phenotypes. *Statistical Methods in Medical Research*. 29(8): 2360-2389.
78. Sande, S.Z. [PhD student], Li, J., D'Agostino, R., Wong, T.Y., Cheng, C.Y. (2020). Statistical Inference for Decision Curve Analysis, with Applications to Cataract Diagnosis. *Statistics in Medicine*. 39(22): 2980-3002.
79. Yang, J., Kuan, P.F., Li, J. (2021). Transformation based on Likelihood Ratio. *Statistical Methods in Medical Research*. 30(2), 354-356.
80. Li, J., Lv, J., Wan, A.K.T., Liao, J. (2022). AdaBoost semiparametric model averaging prediction for multiple categories. *Journal of the American Statistical Association*. 117: 495-509.
81. Lv, J., Li, J. (2022). High-dimensional Varying Index Coefficient Quantile Regression Model. *Statistica Sinica*. 32: 673-694.
82. Wang, B., Li, J., Wang, X. (2021). Change point detection in Cox proportional hazards mixture cure model. *Statistical Methods in Medical Research*. 30(2): 440-457.
83. Fang, F., Li, J., Xia, X. (2022). Semiparametric Model Averaging Prediction for Dichotomous Response. *The Journal of Econometrics*. 229(2): 219-245.
84. Li, J., Li, Y., Jin, B., Kosorok, M.R. (2021). Multi-threshold Change Plane Model: Estimation Theory and Applications in Subgroup Identification. *Statistics in Medicine*. 40(15): 3440-3459.
85. Li, J., Yu, T., Lv, J. Lee, M.L.T. (2021). Semiparametric Model Averaging Prediction for Lifetime Data via Hazards Regression. *Journal of the Royal Statistical Society Series C*. 70(5): 1187-1209.
86. Feng, Q, Li, J., Ping, X., Van Calster, B. (2021). Hypervolume Under ROC Manifold for Discrete Biomarkers with Ties. *Journal of Statistical Computation and Simulation*. 91(18) 3864-3879.
87. Sande, S.Z., Seng, L., Li, J., D'Agostino, R. (2021). Statistical Learning in Medical Research with Decision Threshold and Accuracy Evaluation. *Journal of Data Science*. 19(4): 634-657.
88. Guo, C., Li, J. (2022). Homogeneity and structure identification in semiparametric factor models. *Journal of Business & Economic Statistics*. 40(1), 408-422.
89. Seng, L. [PhD Student], Li, J. (2022). Structural Equation Model Averaging: Methodology and Application. *Journal of Business & Economic Statistics*. 40(2): 815-828.
90. Wang, J. [PhD student], Li, J. (2023). Multi-threshold Structural Equation Model. *Journal of Business & Economic Statistics*. 41(2): 377-387.
91. Li, J., Li, Y., Hsing, T. (2022). On Functional Processes with Multiple Discontinuities. *Journal of the Royal Statistical Society Series B*. 84(3): 933-972.
92. Zhang, F., Li, J., Ng, H.K.T. (2022). Minimum f-Divergence Estimation with Applications to Degradation Data Analysis. *IEEE Transactions on Information Theory*. 68(10): 6774-6789.

93. Yue, M, **Li, J**, Sun, B. (2022). Conditional sparse boosting for high-dimensional instrumental variable estimation. *Journal of Statistical Computation and Simulation*. 92(15): 3087-3108.
94. Wang, B., **Li, J.**, Wang, X. (2022). Multi-threshold Proportional Hazards Model and Subgroup Identification. *Statistics in Medicine*. 41(29):5715-5737.
95. Maiti, R., **Li, J.**, Das, P., Liu, X., Feng, L., Hausenloy, D.J., Chakraborty, B. (2023). A distribution-free smoothed combination method to improve discrimination accuracy in multi-category classification. *Statistical Methods in Medical Research*. 32(2):242-266.
96. Liu, P. [PhD student], **Li, J.** (2024). Segment Regression Model Average with Multiple Threshold Variables and Multiple Structural Breaks. *The Canadian Journal of Statistics*. 52(1): 131-161.
97. Ding, J., **Li, J.**, Han, Y., McKeague, I.W., Wang, X. (2023). Fitting additive risk models using auxiliary information. *Statistics in Medicine*. 42(6): 894-916.
98. Geng, Z., **Li, J.**, Niu, Y., Wang, X. (2023). Goodness-of-fit test for a parametric mixture cure model with partly interval-censored data. *Statistics in Medicine*. 42(4): 407-421.
99. Feng, Q., Liu, P., Kuan, P.F., Zou, F., Chen, J., **Li, J.** (2023). A network approach to compute hypervolume under ROC manifold for multi-class biomarkers. *Statistics in Medicine*. 42(6): 834-859.
100. Liu, P. [PhD student], **Li, J.**, Kosorok, M.R. (2023). Change Plane Model Averaging for Subgroup Identification. *Statistical Methods in Medical Research*. 32(4):773-788
101. Chen, J. [PhD student], Jiang, B., **Li, J.** (2023). Nonparametric Instrument Model Averaging. *Journal of Nonparametric Statistics*. 35, 4: 905-926.
102. Seng, L.L. [PhD student], Liu, C.T., Wang, J., **Li, J.** (2023). Instrumental Variable Model Average with Applications in Mendelian Randomization. *Statistics in Medicine*. 42(19):3547-3567.
103. Jiang, B., **Li, J.**, Yao, Q. (2023). Autoregressive Networks. *Journal of Machine Learning Research*. 24(227):1-69.
104. Yuan, C., Fang, F., **Li, J.** (2024). Model averaging for generalized linear models in diverging model spaces with effective model size. *Econometric Reviews*. 43(1): 71-96.
105. Ding, J., **Li, J.**, Wang, X. (2024). Efficient auxiliary information synthesis for cure rate model. *Journal of the Royal Statistical Society: Series C*. 73(2):497-521.
106. Ding, J., **Li, J.**, Wang, X. (2024). Renewable risk assessment of heterogeneous streaming time-to-event cohorts. *Statistics in Medicine*. 43(20):3761-3777.
107. Liu, Y, Luo, S, **Li, J.** (2024). Hypothesis tests in ordinal predictive models with optimal accuracy. *Biometrics*. Accepted.
108. Jiang, B; Lv, J; **Li, J**; Cheng, MY. (2024). Robust model averaging prediction of longitudinal response with ultrahigh-dimensional covariates. *Journal of the Royal Statistical Society Series B*. Accepted.
109. Yang, J, Kuan, P.F., Li, X., **Li, J.**, Zhou, X. H. (2024). Transformed ROC Curve for Biomarker Evaluation. *Statistics in Medicine*. Accepted.
110. Ding, J; **Li, J**; Xie, P; Wang, X (2024). Efficient risk assessment of time-to-event targets with adaptive information transfer. *Statistics in Medicine*. Accepted.
111. Zhao, D [PhD student], Xia, X, **Li, J.** (2025). A Varying-coefficient Additive Hazard Model for Recurrent Events Data. *Statistics in Medicine*. Accepted.



112. Liu, P [PhD student], Li, Y, **Li, J.** (2025). Change surface regression for nonlinear subgroup identification with application to warfarin pharmacogenomics data. *Biometrics*, Accepted.

### Medical Journal Publications

1. Molldrem, K. L., **Li, J. L.**, Simon, P. W. and Tanumihardjo, S. A. (2004): Lutein and Beta-carotene are bioavailable in humans from lutein yellow carrots. *American Journal of Clinical Nutrition*. 80 (1): 131—136.
2. Tanumihardjo, S. A., **Li, J. L.** and Dosti, M. P. (2005): Lutein absorption is facilitated with co-supplementation of ascorbic acid in young adults. *Journal of the American Dietetic Association*. 105 (1): 114—118.
3. Surles, R. L., **Li, J. L.** and Tanumihardjo, S. A. (2006): The modified-relative-dose-response values in serum and milk are positively correlated over time in lactating sows with adequate vitamin A status. *Journal of Nutrition*. 136 (4): 939—945.
4. Syamala, S, **Li, J** and Shankar, A (2007): Association between serum uric acid and prehypertension among US adults. *Journal of Hypertension*. 25 (8): 1583—1589.
5. Shankar, A, **Li, J** and F. Javier Nieto, Barbara E. K. Klein, and Ronald Klein (2007): Association between C-reactive protein level and peripheral arterial disease among US adults without cardiovascular disease, diabetes, or hypertension. *American Heart Journal*. 154 (3): 495—501.
6. Shankar, A and **Li, J** (2007): Association between serum gamma-glutamyltransferase level and prehypertension among US adults. *Circulation Journal*. 71 (10): 1567—1572.
7. Shankar, A., **Li, J.**, Klein, B., Nieto, F. and Klein, R. (2008): Serum gamma-glutamyltransferase level and peripheral arterial disease. *Atherosclerosis*. 199 (1): 102—109.
8. Jing Li, Soren M. Bentzen, **Jialiang Li**, Markus Renschler, Minesh P. Mehta (2008). Relationship between neurocognitive function and quality of life following whole brain radiation therapy in patients with brain metastasis. *International Journal of Radiation Oncology, Biology, Physics*. 71 (1): 64—70.
9. Shankar, A., Marshall, S., and **Li, J.** (2008). The association between plasma adiponectin level and hypertension. *Acta Cardiologica*. 63 (2): 160—165.
10. A. Shankar, **J. Li** (2008). Positive association between high-sensitivity C-reactive protein level and diabetes mellitus among US non-Hispanic black adults. *Experimental and Clinical Endocrinology & Diabetes*. 116: 455—460.
11. BW Teo, ZY Ng, **J Li**, S Saw, S Sethi, EJC Lee (2009). The choice of estimating equations for glomerular filtration rate significantly affects the prevalence of chronic kidney disease in a multi-ethnic population during health screening. *Nephrology*. 14(6):

588—596.

12. Lei Feng, **Jialiang Li**, Keng-Bee Yap, Ee-Heok Kua, Tze-Pin Ng (2009). Vitamin B-12, Apolipoprotein E genotype and cognitive performance in community-living older adults: evidence of gene-micronutrient interaction. *American Journal of Clinical Nutrition*. 89(4): 1263—1268.
13. Lim, Elaine, Zhang SL, **J Li**, WS Yap, TC Howe, BP Tan, YS Lee, D Wong, Kay Leong Khoo, KY Seto, LKA Tan, T Agasthian, HN Koong, TKC John, C Tan, Caleb, Michael, A Chang, A Ng and Patrick Tan (2009). Using whole genome amplification (WGA) of low-volume biopsies to assess the prognostic role of EGFR, KRAS, p53, and CMET mutations in advanced-stage non-small cell lung cancer (NSCLC). *Journal of Thoracic Oncology*. 4(1): 12—21.
14. Annabelle D. Donaldson, Lubna Razak, **Li Jia Liang**, Dale A. Fisher, Paul A. Tambyah (2009). Carbapenems and subsequent multi-resistant blood stream infection: does treatment duration matter? *International Journal of Antimicrobial Agents*. 34(3): 246--251.
15. Sabanayagam, C., Shankar, A., **Li, J.**, Pollard, C., Ducatman, A. (2009). Serum gamma-glutamyl transferase level and diabetes mellitus among US adults. *European Journal of Epidemiology*. 24(7): 369—373.
16. Hornbeak DM, Dirani M, Sham WK [BS student], **Li J**, Young TL, Wong TY, Chong YS, Saw SM (2010). Emerging trends in breast feeding practices in Singaporean Chinese women: findings from a population-based study. *Annals of the Academy of Medicine, Singapore*. 39(2): 88—94.
17. Ogdie, A., **Li, J.**, Dai, L., Yu, X., Daiz-Torne, C., Schumacher, H. R., and Pessler, F. (2010) Identification of broadly applicable tissue biomarkers of synovitis with binary and multi-category receiver operating characteristic analysis. *Biomarkers*. 15(2): 183—190.
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19. Teo, B. W., Ma, V., **Li, J.**, Xu, H., and Lee, E. J. C. (2010) Profile of hospitalisations and deaths in the first year after diagnosis of end-stage renal disease in a multi-ethnic Asian population. *Annals of the Academy of Medicine, Singapore*. 39 (2):79—87.
20. Teppala, S., Shankar, A., **Li, J.**, Wong, T., Ducatman, A. (2010). Association between serum gamma-glutamyltransferase and chronic kidney disease among US adults. *Kidney & Blood Pressure Research*. 33(1): 1—6.
21. Slansky, E., **Li, J.**, Häupl, T., Morawietz, L., Krenn, V., Pessler, F. (2010). Evaluating tissue biomarkers of synovitis with receiver operating characteristic curve analysis: I. The diagnostic accuracy of a synovitis score and its components. *Histopathology*. 57: 436—443.
22. Sham, WK [BS student], Dirani, M., Chong, YS, Hornbeak, DM, Gazzard, G., **Li, J**, Saw, SM (2010). Breastfeeding and association with refractive error in young Singapore Chinese children (clinical study). *Eye*. 24, 875—880.
23. Kuk, Y. C. A., **Li, J.** and Rush, A. J. (2010). Recursive subsetting to identify patients in the STAR\*D: a method to enhance the accuracy of early prediction of treatment outcome and to inform personalized care. *Journal of Clinical Psychiatry*. 71(11): 1502—1508.

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25. Teo, B. W., Xu, H., Wang, D. [BS student], **Li, J.**, Sinha, A. K., Shuter, B., Sethi, S., and Lee, E. J. C. (2011). Glomerular filtration rate estimating equations in a multi-ethnic Asian population. *American Journal of Kidney Disease*. 58(1):56-63.
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27. Tan AC, Wang JJ, Lamoureux EL, Wong WL, Mitchell P, **Li JL**, Tan AG, Wong TY (2011). Cataract Prevalence varies substantially with Assessment Systems: Comparison of Clinical and Photographic Grading in a Population-based Study. *Ophthalmic Epidemiology*. 18(4):164—170.
28. **Li, J.**, Kuk, Y. C. A., and Rush, A. J. (2012). A practical approach to the early identification of antidepressant medication non-responders. *Psychological Medicine*. 42(2): 309—316.
29. Lei Feng, **Jialiang Li**, Tze-Pin Ng, Tih-Shih Lee, Ee-Heok Kua, Yi Zeng (2012). Tea drinking and cognitive function in oldest-old Chinese. *Journal of Nutrition, Health and Aging*. 16(9): 754—758.
30. Boon Wee Teo, Hui Xu, Danhua Wang [former BS student], **Jialiang Li**, Arvind Kumar Sinha, Borys Shuter, Sunil Sethi, Evan J. C. Lee (2012). Estimating Glomerular Filtration Rates by Use of Both Cystatin C and Standardized Serum Creatinine Avoids Ethnicity Coefficients in Asian Patients with Chronic Kidney Disease. *Clinical Chemistry*. 58(2):450-7.
31. Tan, G.S., He, M., Zhao, W. [former PhD Student], Sakata, L. M., **Li, J.**, Nongpiur, M. E., Lavanya, R., Friedman, D. S., Aung, T. (2012). Determinants of lens vault and association with narrow angles in patients from Singapore. *American Journal of Ophthalmology*. 154: 39-46.
32. Yu, T., **Li, J.**, and Ma, S. (2012). Adjusting Confounders in Ranking Biomarkers: A Model-Based ROC Approach. *Briefings in Bioinformatics*. 13(5):513-23.
33. Baskaran, M., Ong, E.L., **Li, J.L.**, Cheung, C.Y., Chen, D., Perera, S.A., Ho, C.L., Zheng, Y.F., Aung, T. (2012). Classification Algorithms Enhance the Discrimination of Glaucoma from Normal eyes in High Definition Optical Coherence Tomography. *Investigative Ophthalmology & Visual Science*. 53(4):2314-20.
34. Teo, B.W., Xu, H., Koh, Y.Y. [BS student], **Li, J.**, Sinha, A.K., Shuter, B., Sethi, S., Lee, E.J.C. (2012). Estimating Kidney Function in a Multiethnic Asian Population with Multiple Filtration Markers. *American Journal of Kidney Disease*. 60(3):500-2.
35. Lei Feng, **Jialiang Li**, Ee-Heok Kua, Tih-Shih Lee, Keng-Bee Yap, A John Rush, Tze-Pin Ng (2012). Association between tea consumption and depressive symptoms in older Chinese adults. *Journal of the American Geriatrics Society*. 60(12):2358-60.

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37. Wan Ling Wong [PhD student], Xiang Li, **Jialiang Li**, Ching-Yu Cheng, Ecosse L Lamoureux, Jie Jin Wang, Carol Y Cheung, Tien Yin Wong (2013). Cataract Conversion assessment using Lens Opacity Classification System III and Wisconsin Cataract Grading System. *Investigative Ophthalmology & Visual Science*. 54(1): 280—287.
38. Anupama Vasudevan, Amartya Mukhopadhyay, Eugene Goh Yu Yuen, **Jialiang Li**, Paul Ananth Tambyah (2013). Risk factors for infection/colonization caused by resistant gram negative bacilli in critically ill patients. *Preventive Medicine*. 57: S70-S73.
39. Haleh Ghaem Maralani [PhD student], Bee Choo Tai, Tien Y Wong, E Shyong Tai, **Jialiang Li**, Jie Jin Wang, Paul Mitchell (2013). Metabolic Syndrome and Risk of Age-related Cataract over Time: An Analysis of Interval-Censored Data using Random Effects Model. *Investigative Ophthalmology & Visual Science*. 54(1): 641—646.
40. Xiang Li, Wan Ling Wong [PhD student], Carol Y Cheung, C. Y. Cheng, M. K. Ikram, **Jialiang Li**, Kee Seng Chia, Tien Yin Wong (2013). Racial Differences in Retinal Vessel Geometric Characteristics: A Multi-Ethnic Study in Healthy Asians. *Investigative Ophthalmology & Visual Science*. 54: 3650-3656.
41. Cristina Della Beffa, Elisabeth Slansky, Claudia Pommerenke, Frank Klawonn, **Jialiang Li**, Lie Dai, H. Ralph Schumacher Jr., Frank Pessler (2013). The Relative Composition of the Inflammatory Infiltrate as an Additional Tool for Synovial Tissue Classification. *PLoS ONE*. 8(8): e72494
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43. Rongping Ruan, Lei Feng, **Jialiang Li**, Tze-Pin Ng, Yi Zeng (2013). Tea Consumption and Mortality among Oldest-Old Chinese. *Journal of the American Geriatrics Society*. 61(11): 1937—1942.
44. Vasudevan, A., Chuang, L, **Li, J**, Mukhopadhyay, A, Goh EY-Y, Tampyah, PA (2013). Inappropriate empirical antimicrobial therapy for multidrug-resistant organisms in critically ill patients with pneumonia is not an independent risk factor for mortality: Results of a prospective observational study of 758 patients. *Journal of Global Antimicrobial Resistance* 1:123-130.
45. **Li, J.**, Chow, Y., Wong, W.K., and Wong, T.Y. (2014). Sorting Multiple Classes in Multi-dimensional ROC Analysis: Parametric and Nonparametric Approaches. *Biomarkers*. 19(1): 1-8.
46. Boon Wee Teo, Hui Xu, Yun Yin Koh [BS student], **Jialiang Li**, Srinivas Subramanian, Arvind Kumar Sinha, Borys Shuter, Qi Chun Toh, Sunil Sethi, Evan JC Lee (2014). Glomerular filtration rates in healthy Asians without kidney disease. *Nephrology*. 19: 72-79.
47. Haleh Ghaem Maralani [PhD student], Bee Choo Tai, Tien Y Wong, MD, E Shyong Tai, **J. Li**, Jie Jin Wang, Paul Mitchell (2014). The Prognostic Role of Body Mass Index on Mortality amongst the Middle-Aged and Elderly: A Competing Risk Analysis. *Diabetes Research and Clinical Practice*. 103(1):42-50.

48. Natalia Novoselova, Cristina Della Beffa, Junxi Wang, **Jialiang Li**, Frank Pessler, Frank Klawonn (2014). HUM Calculator and HUM package for R: easy-to-use software tools for multicategory receiver operating characteristic analysis. *Bioinformatics*. 30(11):1635-6.
49. Teo, BW, Koh YY, Toh QC, **Li, JL**, Sinha, AK, Shuter, B, Sethi, S, Lee EJC (2014). Performance of the CKD-EPI creatinine-cystatin C glomerular filtration rate estimation equations in a multiethnic Asian population. *Singapore Medical Journal*, 55(12), 656-659.
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51. Wan-Ling Wong [PhD student], Xiang Li, **Jialiang Li**, Tien Yin Wong, Ching-Yu Cheng, and Ecosse Lamoureux (2014). Accounting for standard Errors of Vision-specific Latent Trait in Regression Models. *Investigative Ophthalmology & Visual Science*. 55(9):5848-54.
52. Teo, BW, Toh, QC, Xu, H, Yang, AYT, Lin, TX, **Li, JL**, Lee, EJC (2015). Dietary Protein Intake in a Multi-ethnic Asian Population of Healthy Participants and Chronic Kidney Disease Patients. *Annals, Academy of Medicine, Singapore*, 44(4):145-149.
53. Boon Wee Teo, Qi Chun Toh, Xue Wei Chan, Hui Xu, **Jialiang Li**, Evan JC Lee (2014). Assessment of muscle mass and its association with protein intake in a multi-ethnic Asian population: relevance in chronic kidney disease. *Asia Pacific Journal of Clinical Nutrition*. 23(4):619-625.
54. Feng, L., Ng, X.-T. [BS student], Yap, P., **Li, J.**, Lee, T.-S., Håkansson, K., Ng, T.-P. (2014). Marital Status and Cognitive Impairment among Community-Dwelling Chinese Older Adults: The Role of Gender and Social Engagement. *Dementia and Geriatric Cognitive Disorders EXTRA*, 4(3), 375–384.
55. Anupama Vasudevan, Amartya Mukhopadhyay, **Jialiang Li**, Eugene Goh Yu Yuen and Paul Ananth Tambyah (2015). A prediction tool for nosocomial multi-drug resistant gram-negative bacilli infections in critically ill patients - prospective observational study. *BMC Infectious Diseases*. 14, 615.
56. Anupama Vasudevan, Babar Irfan Memon, Amartya Mukhopadhyay, **Jialiang Li** and Paul Ananth Tambyah (2015). The costs of nosocomial resistant gram negative intensive care unit infections among patients with the systemic inflammatory response syndrome- a propensity matched case control study. *Antimicrobial Resistance and Infection Control*. 4:3.
57. Ghaem Maralani, H, Tai, BC, Wong, TY, **Li J**, Tai, ES, Wang, JJ, Mitchell, P (2015). Metabolic syndrome and risk of age-related macular degeneration. *Retina-The Journal of Retinal and Vitreous Diseases*, 35(3): 459-466.
58. Daxing Wu, Lei Feng, Qi Gao, **Jia Liang Li**, Kailai Selvi D/O Rajendran [BS student], John Chee Meng Wong, Ee Heok Kua, Tze Pin Ng (2016). Association between fish intake and depressive symptoms among community-living older Chinese adults in Singapore: A cross-sectional study. *JNHA - The Journal of Nutrition, Health & Aging*. 20(4): 404-407.
59. Shao, F. [PhD student], **Li, J.**, Fine, J., Wong, W.K., Pencina, M. (2015). Inference for reclassification statistics under nested and non-nested models for biomarker evaluation. *Biomarkers*. 20(4): 240—252.

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61. Mukhopadhyay, A, Maliapen, M, Ong, V, Jakes, RW, Mundy, LW, **Li, J**, Tambyah, PA. (2017). Community-Acquired Pneumonia Case Validation in an Anonymized Electronic Medical Record-Linked Expert System. *Clinical Infectious Diseases*. 64 (S2), S141-4.
62. Tan J, Tsakok FHM, Ow E, Lanskey B, Lim KSD, Goh LG, Tan C-H, Cheah IK-M, Larbi A, Foo R, Loh M, Wong CKY, Suckling J, **Li J**, Mahendran R, Kua E-H and Feng L (2018) Study Protocol for A Randomized Controlled Trial of Choral Singing Intervention to Prevent Cognitive Decline in At-Risk Older Adults Living in the Community. *Front. Aging Neurosci*. 10:195.
63. Anupama Vasudevan, James W Choi, Georges A Feghali, Stuart R Lander, **Li JiaLiang**, Jeffrey M Schussler, Robert C Stoler, Ravi C Vallabhan, Carlos E. Velasco, Peter A. McCullough. (2019). Event Dependence in the Analysis of Cardiovascular Readmissions Post Percutaneous Coronary Intervention. *Journal of Investigative Medicine*. 67(6): 943-949.
64. Lei Feng, Irwin Kee-Mun Cheah, Maisie Mei-Xi Ng (BS student), **Jialiang Li**, Sue Mei Chan, Su Lin Lim, Rathi Mahendran, Ee-Heok Kua, Barry Halliwell (2019). The association between mushroom consumption and mild cognitive impairment (MCI): a community-based cross-sectional study in Singapore. *Journal of Alzheimer's Disease*. 68(1):197-203.
65. Cheung, Y.B., Ma, X., Lam, K.F., **Li, J.**, Milligan, P. (2019). Bias control in the analysis of case-control studies with incidence density sampling. *International Journal of Epidemiology*, 48(6):1981-1991.
66. Yu, Y., Liew, Z., Wang, A., Arah, O., **Li, J.**, Olsen, J., Cnattingius, S., Qin, G., Obel, C., Fu, B., Li, J. (2019). Mediating roles of preterm birth and restricted fetal growth in the relationship between maternal education and infant mortality: a Danish population-based cohort study. *PLOS Medicine*, 16(6): e1002831.
67. Gek Cher CHAN, Peh Joo Ho, **Jialiang LI**, Evan JC LEE, Horng Ruey CHUA , Titus LAU, Sunil SETHI, Boon Wee TEO (2020). High-sensitivity Troponin I Predicts Galectin-3 in Chronic Kidney Disease Patients. *Int. Jour of Uro & Nephrology*. 53(3): 533-540.
68. Cheung, Y.B., Ma, X., Lam, K.F., **Li, J.**, Milligan, P. (2020). Statistical inference in matched case-control studies of recurrent events. *International Journal of Epidemiology*, 49(3): 996-1006.
69. Nusinovi, S, Tham, Y., Yan, M., Ting, D., **Li, J.**, Sabanayagam, C., Wong, T.Y., Cheng, C.-Y. (2020). Logistic regression was as good as machine learning for predicting major chronic diseases. *Journal of Clinical Epidemiology*. 122:56-59.
70. Lei Feng, Rafael Romero-Garcia, John Suckling, Jasmine Tan, Anis Larbi, Irwin Cheah, Glenn Wong, Maurine Tsakok, Bernard Lanskey, Darius Lim, **Jialiang Li**, Joanna Yang, Benjamin Goh, Tristan Gwee Chen Teck, Allan Ho, Xiu Wang, Jin-Tai Yu, Can Zhang, Crystal Tan, Michelle Chua, Junhua Li, John J Totman, Caroline Wong, Marie Loh, Roger Foo, Chay Hoon Tan, Lee Gan Goh, Rathi Mahendran, Brian K. Kennedy, Ee-Heok Kua

- (2020). Effects of choral singing versus health education on cognitive decline and aging: a randomized controlled trial. *Aging*. 12(24): 24798-24816.
71. Cynthia Ciwei Lim, Feng He, **Jialiang Li**, Yih-Chung Tham, Chieh Suai Tan, Ching-Yu Cheng, Tien Yin Wong, Charumathi Sabanayagam (2021). Application of Machine Learning Techniques to understand Ethnic differences and Risk Factors for Incident Chronic Kidney Disease in Asians. *BMJ Open Diabetes Research & Care*. 9(2), e002364.
  72. Ye, K.X., Sun, L., Lim, S. L., **Li, J.**, Kennedy, B.K., Maier, A.B., Feng, L. (2023). Adequacy of Nutrient Intake and Malnutrition Risk in Older Adults: Findings from the Diet and Healthy Aging Cohort Study. *Nutrients*. 15(15), 3446.
  73. Charumathi Sabanayagam, He Feng, Simon Nusinovici, **Jialiang Li**, Cynthia Lim, Gavin Tan, Ching Yu Cheng (2023). Prediction of diabetic kidney disease risk using machine learning models: A population-based cohort study of Asian adults. *Elife*. 12, e81878.
  74. He, F, Ling, C, Nusinovici, S, Cheng, C, Wong, T, **Li, J**, Sabanayagam, C (2024). Development and external validation of machine learning models for diabetic microvascular complications: Cross-sectional study with metabolites. *Journal of Medical Internet Research*, 26, e41065.
  75. Sudarshan Seshasai, Feng He, Betty Lam Jia Wen, Haslina Hamzah, Ching-Yu Cheng, **Jialiang Li**, Tien Yin Wong, Gavin Siew Wei Tan, Charumathi Sabanayagam (2024). Transition probabilities of diabetic retinopathy and death in an Asian population with Diabetes. *Asia-Pacific Journal of Ophthalmology*, 13(3), 100070.
  76. Jie Ding, **Jialiang Li**, Mengxiu Zhang, Xiaoguang Wang (2024). CureAuxSP: An R package for estimating mixture cure models with auxiliary survival probabilities. *Computer Methods and Programs in Biomedicine* 251.
  77. Yu Fung Yau, Irwin K Cheah, Rathi Mahendran, Richard MY Tang, Ru Yuan Chua, Rachel E S Goh, Lei Feng, **Jialiang Li**, Ee Heok Kua, Christopher Chen and Barry Halliwell (2024). Investigating the efficacy of ergothioneine to delay cognitive decline in mild cognitively impaired subjects: A pilot study. *Journal of Alzheimer's Disease*. Accepted.

### Monograph

**Li, J.** and Ma, S. (2013). *Survival Analysis in Medicine and Genetics*. Chapman & Hall/CRC Press.

### Book Chapters

Malay Ghosh, Kwok Pui Choi, **Jialiang Li** (2011). A commentary on the logistic distribution. In *The legacy of Alladi Ramakrishnan in the Mathematical Sciences* (Krishnaswami Alladi, eds.). Springer. Page 351—357.

## PROFESSIONAL SERVICES

**Associate Editor** for *Annals of Applied Statistics* (2023—2024).

**Associate Editor** for *Biometrics* (2010—2012, 2012—2014, 2014—2016, 2016—2018).

**Associate Editor** for *Lifetime Data Analysis* (2013—).

**Guest Co-Editor** for the special issue of *Causal Inference for Lifetime Data Analysis*.

**Editorial Committee** for *Annual Review of Statistics and Its Application* 2023—2028.

**Associate Editor** for *Statistical Methods in Medical Research* (2024—)

**Associate Editor** for *Biostatistics & Epidemiology* (2016—2023).

**Associate Editor** for *Communications for Statistical Applications and Methods* (2017—).

**Topic Editor** for *Research Methods in Medicine & Health Sciences* (2021—).

**Statistics Editor** for *Biomarkers* (2010—).

**Statistical Advisor** for *The British Journal of Psychiatry (BJPsych Open)* (2022—).

### Serviced society committees:

**International Biometric Society (IBS)**, Correspondent for Singapore Region, since 2012.

Member of IBS Budget and Finance Committee: 2016-2019, 2020-2023.

**International Chinese Statistical Association (ICSA)**, Board of Director, 2024-2026.

**Resource Person** for *National Medical Research Council, Singapore*.

**Expert Reviewer** for *Ministry of Education and Science of the Russian Federation, Dutch Research Council*.

**Reviewer** for *Swiss National Science Foundation, Swiss*.

**Reviewer** for *Dutch Research Council (NWO), Netherland*.

**Reviewer** for *Health and Medical Research Fund* from Hong Kong Special Administrative Region (HKSAR).

### Conferences and Seminars:

August 2007, Joint Statistical Meeting: Organizer and Chair for Topic Contributed Session “*Recent Development of Statistical Methods in Diagnostic Medicine*”. Salt Lake City, UT, USA.

August 2010, Joint Statistical Meetings: Invited Speaker for Topic Contributed Session “*Modern Methods of Analyzing Correlated Data from the Health Sciences*”. Vancouver, Canada.

October 2011, Workshop on Design and Analysis of Clinical Trials. Organizing committee member. Singapore.

August 2012, Joint Statistical Meetings: Invited Speaker for Topic Contributed Session “*Survival Analysis*”. San Diego, CA, USA.

August 2012 – January 2013, Sabbatical Leave visit at University of North Carolina, Chapel Hill, NC, USA.

August 2015, Joint Statistical Meetings: Organizer and Chair for the Invited Session “*Statistics in Diagnostic Medicine: Prediction and Improvement*”. Invited speaker for the Topic-Contributed Session “*Lifetime Data Analysis for Medical Decision-making*”. Seattle, USA.

December 2015, IASC-ARS 9<sup>th</sup> Conference: Committee Chair of Local Organizing Committee



and Committee Member of Scientific Program Committee. Singapore.

June 2016, 4<sup>th</sup> IMS-APRM Meeting: Invited Speaker for the Invited Session “*Nonparametric Modelling and High Dimensional Data Analysis*” and Organizer for the Invited Session “*Longitudinal Data Analysis*”. Hong Kong.

July 2017, Member of the Organizing Committee for IMS workshop: Quantitative Methods for Drug Discovery and Development. Singapore.

December 2017, Invited speaker for IISA Conference in Hyderabad, India.

April 2018, Invited seminar speaker at Lancaster University, UK.

June 2018, Invited speaker for IMS-APRM 2018. Singapore.

July 2018, Invited speaker for ICSA China Conference, Qingdao, China.

July 2018, Invited speaker for The Fifth International Biostatistics Symposium, Guangzhou, China.

November 2018, Member of the program committee for IASC-ARS 25<sup>th</sup> Anniversary Conference & CASC 2<sup>nd</sup> Annual Conference, Beijing.

February 2019, Member of the Organizing Committee for IMS workshop: Design of mHealth Intervention Studies and Analysis of Data from mHealth Intervention Studies. Singapore.

February 2019, Invited speaker for workshop on “Healthcare in the Era of Big Data and Artificial Intelligence”. Singapore.

June 2019, Organizer for an invited session and Invited speaker in ICSA Applied Statistics Symposium in Raleigh, USA.

April 2019, Invited speaker for the workshop on New and Evolving Roles of Shrinkage in Large-Scale Prediction and Inference in The Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada.

June 2019, Organizer for an invited session and Invited speaker in ICSA Applied Statistics Symposium in Raleigh, USA.

August 2019, Invited field trip to York University, UK.

December 2019, Invited speaker at ICSA Conference in Hangzhou, China.

February 2020 invited seminar speaker at Victoria University of Wellington, New Zealand.

August 2020, Joint Statistical Meetings: Organizer for the Invited Session “*Survival Analysis in Causal Inference Studies*”. Invited speaker for the Topic-Contributed Session “Machine Learning in Causal Inference with Applications in Complicated Settings”. Virtual Meeting.

July 2021, member of organizing committee for the Bernoulli-IMS 10<sup>th</sup> World Congress in Probability and Statistics Young Researcher Meeting. Virtual Meeting.

August 2021, Joint Statistical Meetings: Organizer and Chair for the Invited Session “*New Development of Change Point Methods*”. Invited speaker for the Invited Session “*New Statistical learning and methods in Nonparametric Statistics*”. Virtual Meeting.

2021 September, member of ICSA 2021 Applied Statistics Symposium Scientific Program Committee. Virtual Meeting.

December 2021, member of organizing committee for IMS workshop on Causal Inference with Big Data. Virtual Meeting. Singapore.

January 2022, co-chairs of organizing committee for IMS workshop on Statistical Methods in

Genetic/Genomic Studies. Virtual Meeting. Singapore.

June 2022, invited speaker at IMS Annual Conference at London, UK.

August 2022, Joint Statistical Meetings: Organizer and Discussant for the Topic Contributed Session “*Network Data Analysis*”. Washington DC, USA.

December 2022, program committee member for the 1<sup>st</sup> International Conference of Statistics and Data Science (ICSDS), Florence, Italy. Organizer and chair for an Invited Session.

February-November 2023, sabbatical leave visit at Peking University, Beijing, China.

March 2023, invited seminar speaker at London School of Economics, UK.

July 2023, organizer and invited speaker for ICSA China Conference, Chengdu.

July 2023, member of the 12<sup>th</sup> ICSA International Conference Scientific Program Committee, Hong Kong.

July 2023, invited speaker at Joint Conference on Statistics and Data Science in China, Beijing.

July 2023, invited speaker at the 9<sup>th</sup> International Forum on Statistics, Beijing, China.

July 2023, co-chairs of organizing committee for IMS workshop on Emerging New Topics in Functional Data Analysis. Singapore.

August 2023 Joint Statistical Meetings: Organizer for the Invited Session “*Machine learning methods for precision medicine*”. Toronto, Canada.

December 2023, program committee member for the 2<sup>nd</sup> International Conference of Statistics and Data Science (ICSDS), Lisbon. Organizer of an Invited Session.

January 2024, member of IMS-APRM 2022 Scientific Program Committee. Melbourne, Australia. Organizer, Invited speaker and Chair.

May 2024 co-chairs of organizing committee for IMS workshop on Statistical Machine Learning for High Dimensional Data. Singapore.

June 2024, ICSA China Conference, Organizer and Invited speaker, Wuhan.

July 2024, International Conference for Statistics and Data Science, Invited speaker, Taipei.

July 2024, International Society on Business and Industrial Statistics Conference, Invited speaker and Discussant, Yogyakarta.

November 2024, Invited seminar speaker at University of Melbourne, Australia.

December 2024, program committee member for the 3<sup>rd</sup> International Conference of Statistics and Data Science (ICSDS), Nice, France. Organizer and chair for an Invited Session.

**Membership:**

Institute of Mathematical Statistics (IMS).

American Statistical Association (ASA).

International Statistical Institute (ISI).

International Biometric Society (IBS).

International Chinese Statistical Association (ICSA).

## TEACHING EXPERIENCES

**Lecturing:**

Fall 2006: Statistical Methods for Health Science  
Spring 2007, 2008, 2009, 2010, 2015: Longitudinal Data Analysis  
Fall 2007: Survival Analysis  
Fall 2009: Experimental Design  
Fall 2010: Generalized Linear Model  
Spring 2011: Regression Analysis  
Fall 2011, 2013, 2014: Design and Analysis of Clinical Trials  
Spring 2012: Introduction to Statistics (class size: 183)  
Spring 2014: Statistical Methods for Genetic Analysis  
Fall 2015, spring 2017: Business Analytics – Data and Decisions (class size: 430, 355)  
Spring 2016, spring 2018: Statistical Models: Theory/Applications  
Fall 2016: High-dimensional Statistical Analysis  
Fall 2017: Nonparametric Regression (class size: 120)  
Spring 2019, 2020, 2021, 2022: Applied Data Mining (class size: 112, 157, 182, 242)  
Fall 2021: Probability and Statistics (class size: 810)  
Fall 2022: Applied Time Series Analysis  
Spring 2024: Advanced Topics in Applied Statistics  
Fall 2024: Computational Statistics

**Supervising:**

- Papia Sultana (PhD, 2009)
- Zhao, Wanting (PhD, 2010)
- Zhang, Yanyu (PhD, 2010)
- Fang, Xicheng (PhD, 2013)
- Huang, Zhipeng (PhD, 2013)
- Shao, Fang (PhD, 2013)
- Wong, Wan Ling (PhD, 2014)
- Haleh Ghaem (PhD, 2014)
- Chen, Dacheng (PhD, 2017)
- Yue, Mu (PhD, 2017)
- Wang, Jingli (PhD, 2019)
- Sumaiya Zakirhusen Sande (PhD, 2021)
- Seng, Loraine Liping (PhD, 2022)
- Chen, Jianan (PhD, 2024)
- Ye, Kaisy Xinhong (PhD, 2024)
- Liu, Pan (PhD, 2024)
- Yu, Yuetao (PhD, 2020--)
- Zhao, Da (PhD, 2020--)
- He, Jiaxin (PhD, 2021—)
- Cui, Bosen (PhD, 2021--)
- Gang, Mingjun (PhD, 2023--)

- Wu, Yujin (PhD, 2023--)
- Wu, Mutong (PhD, 2023--)
- Zhu, Xuelin (PhD, 2024--)
- Xu, Meng (exchange PhD student, Sichuan University 2017)
- Li, Yaguang (exchange PhD student, USTC 2019)
- Chiara Giusy Genovese (exchange PhD student, University of Bologna, Italy 2020)
- Wang, Ling (MS, 2010)
- He, Feng (MS, 2020)
- Walid Bousselham (MS, 2020)

## FUNDED RESEARCH

### **External Funding:**

**Principal Investigator:** High Dimensional ROC Analysis: Methods and Applications in Eye and Other Diseases. \$151,302. *National Medical Research Council*. 02/06/2009—01/06/2011 (Grant No: NMRC/NIG/0054/2009).

**Principal Investigator:** Applications of Semiparametric Regression Models in Prospective Cohort Studies. \$800,981. *National Medical Research Council*. 01/07/2012—31/01/2017 (Grant No: NMRC/CBRG/0014/2012, CBRG11nov060).

**Principal Investigator:** Semiparametric Model Average in High-dimensional Data Analysis. \$307,800. *MOE Tier 2 Funding*. 01/06/2018—30/11/2021. R-155-000-197-112. MOE2017-T2-2-082.

**Co-Investigator:** Singapore Kidney Function Study. \$150,000. 2008—2011. *National Kidney Foundation*, Singapore (PI: Teo Boon Wee).

**Co-Investigator:** The Singapore Malay Eye Study 2 (SiMES-2) - Prospective cohort study of 6-year incidence, risk factors, and impact of major Asian Eye Diseases. \$ 1,472,642. IRG09nov014. *National Medical Research Council*. 2009—2012 (PI: Wong Tien Yin).

**Co-Investigator:** Diet and cognitive health in ageing: a community-based prospective cohort study. \$375,000. *National Medical Research Council*. 2016—2019 (PI: Feng Lei).

**Co-Investigator:** Statistical Methods for Degradation in Common Dynamic Environments. *MOE Tier 2 Funding*. 2018—2021. (PI: Ye Zhisheng).

**Co-Investigator:** Bayesian Machine Learning Approach to Identify Markers of Progression in

Primary Angle Closure Glaucoma. \$749,000. CIRG19may0029. *National Medical Research Council*. 2019—2022 (PI: Monisha Esther Nongpiur).

Collaborator: Variational inference, Epigenetics, Epigenome-wide association studies, DNA methylation, Cell-type heterogeneity. MOE Tier 2 Funding. 2018—2021. (PI: Lin Xinyi)

Collaborator: Asian Kidney Disease Study. *NUS Start-up Grant*, Singapore (PI: Teo Boon Wee); Asian Glomerular Filtration Rate Study. Funding from *National Healthcare Group Pte Ltd*, Singapore (PI: Teo Boon Wee); Multiple-biomarker approach to glomerular filtration rate determination in healthy and chronic kidney disease patients. *ARF*, Singapore (PI: Teo Boon Wee).

International collaborator: “Si-Ge Net Rheum”: Singaporean-German Network for Rheumatology Research. *German Ministry for Education and Science* (PI: Frank Pessler, Technical University Dresden, Germany).

**Internal Funding:**

**Principal Investigator:** Estimation of Multi-Dimensional Effective Dose in a Semiparametric Model. *Academic Research Funding*. 01/01/2007—31/01/2009 (Grant No: R1555000066).

**Principal Investigator:** Optimal Dynamic Control in Gaussian Process Regression Model. *Academic Research Funding*. 01/08/2008—31/07/2010 (Grant No: R-155-000-082-112).

**Principal Investigator:** Methodology and applications of weighted area under the ROC curve. *Academic Research Funding*. 01/08/2010—31/07/2012 (Grant No: R-155-000-109-112).

**Principal Investigator:** Semiparametric Model for Multivariate Longitudinal Data. *Academic Research Funding*. 15/08/2012—14/08/2014 (Grant No: R-155-000-130-112).

**Principal Investigator:** High-dimensional Penalized Estimation for Survival Analysis. *Academic Research Funding*. 15/08/2014—14/08/2016 (Grant No: R-155-000-152-112).

**Principal Investigator:** Classification and Prediction Accuracy Improvement for Multiple Categories. *Academic Research Funding*. 01/09/2016—31/09/2018 (Grant No: R-155-000-174-114).

**Principal Investigator:** Statistical Evaluation of Classification Accuracy for Deep Learning. *Academic Research Funding*. 01/02/2018—31/12/2020 (Grant No: R-155-000-195-114).

**Principal Investigator:** SUBGROUP IDENTIFICATION BASED ON CHANGE POINT ESTIMATION. *Academic Research Funding*. 01/01/2019—30/06/2022 (Grant No: R-155-000-205-114).

**Principal Investigator:** Nonparametric estimation of structural equation model. *Academic Research*

*Funding.* 01/01/2022—31/12/2024 (Grant No: AcRF A-8000016-00-00, iRIMS Award number 21-0040-A0001).

**Principal Investigator:** A New Spectral Approach to Dynamic Network Modelling. *Academic Research Funding.* 01/01/2024—31/12/2026 (Grant No: AcRF A-8001947-00-00, iRIMS Award number 23-0934-A0001).

**Co-Investigator:** An Investigation of Singaporean Women's Knowledge, Attitudes and Practices Associated with Menopause. *NUS Start-up Grant.* 2010—2012 (PI: Sandra Mackey).

**Co-Investigator:** Evaluating the role of dynamic renal function testing (GFR stress test) in predicting kidney disease progression. 2011—2014. *Academic Research Funding* (PI: Teo Boon Wee).

## COMMITTEE AND ADMINISTRATION SERVICES

### Department Committees

**Deputy Head,** 2018 to 2021.

**Graduate Research Program Committee,** 2010 to 2012, 2018 to 2024. Co-chair, 2020-2021. Chair, 2021-2022.

**Research Excellence Committee,** 2021-2023.

**Teaching Evaluation Committee,** 2013 to 2014.

**Statistical Consulting Center,** 2013 to 2015, Co-director.

**Statistical Consulting Committee,** 2007 to 2010.

**Search Committee,** 2014 to 2020, 2023-. Co-chair, 2016-2017. Chair, 2017-2018.

**Seminar Chair,** 2015 to 2016.

**Student Exchange Committee,** Chair, 2023-2024.

**Peer Review,** 2022 to 2023.

### NUS Committees

**Faculty Research Committee,** 2018 to 2021.

**Faculty Promotion & Tenure Committee (Senior),** 2024.

**Management Board of the Centre for Data Science and Machine Learning (CDSML),** 2024-2026.

### Other Services

**Thesis Committee,** for 50+ students:

**Domain Specific Review Boards,** 2010 to present, National Healthcare Group Pte Ltd. Reviewed IRB applications for scientific studies.

**Khoo Clinical Scholar (KCS) Program Quantitative Mentor,** 2009 to 2010, Duke-NUS Graduate Medical School. Provided statistical consultant and tutorials.

**Master of Clinical Investigation (MCI) Program Quantitative Mentor,** 2011 to 2012,

Duke-NUS Graduate Medical School. Provided statistical consultant and tutorials.