

# C U R R I C U L U M   V I T A E

## JIAHUA CHEN

Department of Statistics University of British Columbia  
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### DEGREES

- 1990   Ph.D.   Department of Statistics, University of Wisconsin-Madison  
                  On Minimum Aberration Fractional Factorial Designs  
                  Supervisor: C. F. Jeff Wu
- 1985   M.Sc.   Institute of Systems Science, Academia Sinica, China  
                  On Asymptotic Efficient Estimations  
                  Supervisor: Ping Cheng
- 1982   B.Sc.   University of Science and Technology of China

### EMPLOYMENT RECORD

- Canada Research Chair, Tier I   Jan 1, 2007 –  
  Department of Statistics, UBC
- Visiting Professor                            Aug. 2005 – Aug. 2006  
  National University of Singapore
- Professor                                        July, 2001 – Dec, 2006
- Associate Professor                         July 1996 – June 2001
- Assistant Professor                          July 1991 – June 1996  
  Department of Statistics and Actuarial Science  
  University of Waterloo
- Visiting Scientist                             August 1997 – December 1997  
  Mount Sinai Hospital
- Visiting Professor                             Jan. 1998 – April 1999  
  Bowling Green State University
- Postdoctoral Fellow                         Sept. 1990 – June 1991  
  Department of Statistics and Actuarial Science  
  University of Waterloo
- Junior Researcher                             Jan. 1985 – June 1986  
  Institute of Systems Science  
  Academia Sinica, China

## RESEARCH AND SCHOLARSHIP

### Fields of Interest:

Finite Mixture Models, Empirical Likelihood, Hidden Markov Model, Variable Selection, Statistical Genetics, Sample Survey, Experimental Design, Asymptotic Theory, Information inequality.

## HONOURS

1. Winner of the CRM-SSC Prize (The Centre de recherches mathématiques and The Statistical Society of Canada) for outstanding contributions to the statistical science within 15 years of Ph.D. 2005.
2. Elected fellow of the Institute of Mathematical Statistics, 2005.
3. Faculty of Mathematics Fellowship, University of Waterloo, May 2005 – April 2008.
4. Elected fellow of the American Statistical Association, 2009.
5. Canada Research Chair Tier I. UBC (2007-2013; 2014-2020).
6. UBC Killam Faculty Research Fellowship, 2013.
7. **Gold Medal** of the Statistical Society of Canada, 2014.

## MAJOR COMMUNITY SERVICES

- **Associate Editor: Statistical Science.** 2014–.
- Editor: ICSA book series in statistics with Springer. 2013–.
- Executive Editor: the Canadian Journal of Statistics, 2010-2012.
- President of the Section of Survey Methodology, the Statistical Society of Canada. (2007)
- President of the International Chinese Statistical Association (2005-2006).
- Member of Grant Selection Committee of the Natural Science and Engineering Research Council of Canada. 1999-2002.

- Member of NSF statistics penal review committee, 2006.
- Invited member of the Engineering and Physical Science Research Council, Peer Review College, U.K. 2006-.
- Invited member of the Canadian Institutes of Health Research, Genetics Panel, 2009.
- Associate Editor of *Journal of Statistical Planning and Inferences*. Feb, 2009-Dec, 2009.
- Associate Editor of *Statistica Sinica*. Sept, 2005- Dec 2009.
- Associate Editor of *the Canadian Journal of Statistics*. 2002-2006. 2013-.
- Associate Editor of *Quality Technology and Quantitative Management*. Jan 2003-Dec 2009.

## PUBLICATIONS

Coauthors of former or current graduate students at the time of research done are marked with \*.

### Refereed Papers

1. Chen, J. (2015). “The Joy of Proofs in Statistical Research”. *The Canadian Journal of Statistics*.
2. Chen, J, Huang\*, Y. and Wang, Peiming. “Composite likelihood under hidden Markov model”. *Statistica Sinica*. Accepted Feb 2014.
3. Wang, L, Chen, J. and Pu, Xiaolong (2015). “Adjusted Empirical Likelihood with High-order Precision through Resampling”. *The Canadian Journal of Statistics*. **43**, 42–59.
4. Xu\*, C., Chen, J. (2015) “A Thresholding Algorithm for Order Selection in Finite Mixture Models”. *Communications in Statistics - Simulation and Computation*. **44**, 433-453.

5. Li, S., Chen, J., Guo, J. Jing, B.Y., Tsang, S.Y. and Xue, H. (2014). “Likelihood Ratio Test for Multi-Sample Mixture Model and its Application to Genetic Imprinting”. *The Journal of American Statistical Association*. **110**, 867–877.
6. Liu, Yukun, Chen, J, and Li, T. (2014). “Level-specific correction for nonparametric likelihoods”. *Journal of Nonparametric Statistics*. **26** 433–449.
7. Xu\*, C. and Chen, J. (2014). “The Sparse MLE for Variable Screening in Ultra-High-Dimensional Feature Space”. *The Journal of American Statistical Association*. **109**, 1257–1269.
8. Chen, J. and Liu, Y. (2013). “Quantile and quantile function estimations under density ratio model”. *The Annals of Statistics*. **41**, 1669-1692.
9. Xu\*, C., Chen, J. and Mantel H. (2013). “Pseudo-Likelihood-Based Bayesian Information Criterion in Analysis of Survey Data”. *Survey Methodology* **39**, 303-321.
10. Zou\*, W. and Chen, J. (2013). “Markov regime-switching model in crude oil market: Comparison of composite likelihood and full likelihood”. *The Canadian Journal of Statistics*. **41**, 353-367.
11. Chen, J. (2013). “A Partial Order on Uncertainty and Information”. *Journal of Theoretical Probability*. **26**, 349-359.  
<http://www.springerlink.com/content/n5831n104562x41n/>
12. Chen, J. and Huang\*, Y. (2012). “Finite-sample properties of the adjusted empirical likelihood”. *Journal of Nonparametric Statistics*. **25**, 147-159.
13. Shangari\*, D. and Chen, J. (2012). “Partial Monotonicity of Entropy Measures”. *Statistics and Probability Letters*. **82**, 1935-1940.
14. Chen, J., Li, P., and Fu, Y. (2012). “Inference on the order of a normal mixture”. *The Journal of American Statistical Association*. **107**, 1096-1105.

15. Chen, J. and Liu, L. (2012). “Adjusted Empirical Likelihood with High-Order One-Sided Coverage Precision”. *Statistics and its Interface*. **5**, 281-292.
16. Chen, J. and Chen Z. (2012). “Extended BIC for small- $n$ -large- $P$  sparse GLM”. *Statistica Sinica*. **22**, 555-574.
17. Chen, J. and Li, P. (2011). “Tuning the EM-test for the order of finite mixture models”. *The Canadian Journal of Statistics*. **39**, 389-404.
18. Li, X., Chen, J., Wu, Y. and Tu, D. (2011). “Constructing nonparametric likelihood confidence regions with high-order precisions”. *Statistica Sinica*. **21**, 1767-1783.
19. Carrillo\*, I.A., Chen, J. and Wu, C. B. (2011). “Pseudo-GEE Approach to Analyzing Longitudinal Surveys under Imputation for Missing Responses”. *Journal of Official Statistics*. **27**, 255-277.
20. Khalili, A., Chen, J. and Lin, S. (2011). “Feature Selection in Finite Mixture of Sparse Normal Linear Models in High Dimensional Feature Space”. *Biostatistics*. **12**, 156-172.
21. Carrillo\*, I.A., Chen, J. and Wu, C. B. (2010). “The pseudo-GEE approach to the analysis of longitudinal surveys”. *The Canadian Journal of Statistics*. **38**, 540-554.
22. Chen, H., Chen, J. and Chen, S. (2010). “Confidence Intervals for the Mean of a Population Containing Many Zero Values Under Unequal Probability Sampling”. *The Canadian Journal of Statistics*. **38**, 582-597.
23. Chen, J., van Eeden, C. and Zidek, J. (2010). “Uncertainty and the Conditional Variance”. *Probability and Statistics Letters*. **80**. 1764–1770
24. Li, P. and Chen, J. (2010). “Testing the order of a finite mixture”. *The Journal of American Statistical Association*. **105**, 1084–1092
25. Cadigan, N. G. and Chen, J. (2010). “Simple kernel regression estimators with improved statistical properties”. *Journal of Statistical Theory and Practice*. **4**, 1-25.

26. Variyath, M. A., Chen, J. and Abraham, B. (2010). “Empirical likelihood based variable selection”. *Journal of Statistical Planning and Inferences*. **140**, 971–981
27. Liu\*, Y. and Chen, J. (2010). “Adjusted Empirical Likelihood with High-Order Precision”. *The Annals of Statistics*. **38**, 1341-1362.
28. Zhu, H., Zhou, H., Chen, J., Li, Y., and Styner, N. (2009). “Adjusted exponentially tilted likelihood with applications to brain morphology”. *Biometrics*. **65**, 919–927.
29. Chen, Z. and Chen, J. (2009). “Tournament screening cum EBIC for feature selection with high dimensional feature spaces”. *Science in China, Series A: Mathematics*. **52**, 1327-1341.
30. Chen, J. and Tan,\* X. (2009). “Inference for multivariate normal mixtures”. *Journal of Multivariate Analysis*. **100**, 1367-1383.
31. Fu\*, Y., Chen, J., and Kalbfleisch, J.D. (2009). “Modified likelihood ratio test for homogeneity in a two-sample problem”. *Statistica Sinica*. **19**, 1603-1619.
32. Li\*, P., Chen, J., and Marriot, P. (2009). “Non-finite Fisher information and homogeneity: the EM approach”. *Biometrika*, **96**, 411-426.
33. Chen, J. and Li\*, P. (2009). “Hypothesis test for Normal Mixture Models: the EM Approach”. *The Annals of Statistics*. **37**, 2523-2542.
34. Chen, J. and Khalili\*, A. (2008). “Order selection in finite mixture models”. *The Journal of American Statistical Association*. **103**, No. 484: 1674–1683.
35. Pan, J. and Chen, J. (2008). “U-statistic based modified information criterion for change point problems”. *Communication in Statistics-Theory and Methods*. **37**, 2687 - 2712.
36. Chen, J. and Chen, Z. (2008). “Extended Bayesian information criterion for model selection with large model space”. *Biometrika*, **95**, 759-771.

37. Chen, J. and Qin, Y. (2008). “Test of homogeneity for finite mixture models with Hardy-Weinberg proportions.” *Journal of Statistical Planning and Inferences*, **138** 3774-3788.
38. Chen, J., Li\*, P. and Fu\*, Y. (2008). “Tests for homogeneity in a mixture of von Mises distributions in the presence of a structural parameter.” *The Canadian Journal of Statistics*, **36**, 129-142.
39. Chen, J., Tan\*, X. and Zhang, R. (2008). “Consistency of penalized MLE for normal mixtures in mean and variance”. *Statistica Sinica*, **18**, 443-465.
40. Chen, J., Variyath\*, M. A. and Abraham, B. (2008). “Adjusted empirical likelihood and its Properties”. *Journal of Computational and Graphical Statistics*, **17**, 426-443.
41. Fu\*, Y., Chen, J., and Li\*, P. (2008). “Modified likelihood ratio test for homogeneity in a mixture of von Mises distributions”. *Journal of Statistical Planning and Inferences*, **138**, 667-681.
42. Khalili\*, A. and Chen, J. (2007). “Variable selection in finite mixture of regression models”. *The Journal of the American Statistical Association*, **102**, 1025-1038.
43. Feng\*, Z. Chen, J., and Thompson, M. E. (2007). “Asymptotic properties of the likelihood ratio test statistics with the possible triangle constraint in Affected-Sib-Pair analysis”. *The Canadian Journal of Statistics*. **35**, 351-364.
44. Chen, J. and Rao, J.N.K. (2007). “Asymptotic normality under two-phase sampling designs”. *Statistica Sinica*, **17** 1047-1064.
45. Chen, J., Li\*, P., and Tan\*, X. (2006). Inference for von Mises mixture in mean direction and concentration parameters. *Journal of System's Science and Mathematics*, **27** 59-67.
46. Pan\*, J. and Chen, J. (2006). “Application of modified information criterion to multiple change point problems”. *Journal of Multivariate Analysis*, **97**, 2221-2241

47. Chen, J., Gupta, A. J., and Pan\*, J. (2006). "Information criterion and change point problem for regular models". *Sankhya*, **68**, 252-282.
48. Fu\*, Y., Chen, J., and Kalbfleisch, J. D. (2006). "Testing for homogeneity in genetic linkage analysis". *Statistica Sinica*, **16**, 805-823.
49. Tu, D., Chen, j., Shi, P. and Wu, Y. (2005). "A Bartlett type correction for Rao's score test in Cox regression model". *Sankhya*, **67**, 722-735.
50. Feng\*, Z., Chen, J. and Thompson, M.E. (2005) "The universal validity of the possible triangle constraint of the Affected-Sib-Pairs". *The Canadian Journal of Statistics*, **33**, 297-310.
51. Mulayath Variyath\*, A., Abraham, B. and Chen, J. (2005). "Analysis of performance measures in experimental designs using jackknife". *Journal of Quality Technology*, **37**, 91-101. Special invited presentation in the 49th Annual Fall Technical Conference 2005. St. Louis, MO.
52. Chen, J. and Kalbfleisch, J. D. (2005) "Modified likelihood ratio test in finite mixture models with a structural parameter". *Journal of Statistical Planning and Inferences*, **129**, 93-107.
53. Chen, J., Thompson, M. and Wu, C. B. (2004). "Statistical Analysis for the FPI Expanded Survey of Divisions 3LNO". *Biometrics*. **15**, 116-123.
54. Chen, H., Chen, J. and Kalbfleisch, J. D. (2004). "Testing for a finite mixture model with two components". *Journal of the Royal Statistical Society, B.*, **66**, 95-115.
55. Chen, J., Lin, K.J. D. and Thomas, D. (2003). "Item fill rate for finite Horizon". *Operation Research Letters*, **31**, 119-123.
56. Chen, J. and Gupta, A.J. (2003). "Information theoretic approach for detecting change in the parametric of normal model". *Mathematical Methods of Statistics*, **12**, 116-130.
57. Wei, L. and Chen, J. (2003). "Empirical bayes estimation and its superiority for two-way classification model". *Probability and Statistics Letters*, **63**, 165-175.



58. Chen, J., Chen, S. and Rao, J.N.K. (2003). "Empirical likelihood confidence intervals for the mean of a population containing many zero values". *The Canadian Journal of Statistics*, **31**, 53-68.
59. Chen, H. and Chen, J. (2003). "Tests for homogeneity in normal mixtures with presence of a structural parameter". *Statistica Sinica*, **13**, 351-365.
60. Chen, J. and Wu, C. (2002) "Estimation of distribution function and quantiles using the model-calibrated pseudo empirical likelihood method". *Statistica Sinica*, **12**, 1223-1239.
61. Chen, G., Chen, J. and Chen, Y. (2002) "Statistical Inference on comparing two distribution functions with a possible crossing point." *Statistics and Probability Letters*, **60**, 329-342.
62. Chen, J., Sitter, R.R., and Wu, C. (2002) "Using Empirical Likelihood Methods to Obtain Range Restricted Weights In Regression Estimators For Surveys". *Biometrika*, **89**, 230-237.
63. Chen, J., Kalbfleisch J.D. and Romero Hidalgo\*, S. (2002). "Genetic data analysis of affected sib pairs". *The Canadian Journal of Statistics*, **30**, 145-152.
64. Chen, H., Chen, J. and Kalbfleisch, J.D. (2001). "A modified likelihood ratio test for homogeneity in finite mixture models". *Journal of the Royal Statistical Society, B.*, **63**, 19-29.
65. Chen, J. and Shao, J. (2001) "Variance estimation under nearest neighbor imputation". *The Journal of American Statistical Association*, **96**, 260-269.
66. Chen, H. and Chen, J. (2001). "Large sample distribution of the likelihood ratio test for normal mixtures". *Probability and Statistics Letters*, **52**, 125-133.
67. Susko\*, E., Chen, J. and Kalbfleisch, J.D. (2001). "A Diagnostic Tool for Mixture Models". *Journal of Statistical Computation and Simulation*, **69**, 293-314.

68. Cadigan\*, N. and Chen, J. (2001). “Properties of robust M-estimators for Poisson and binomial data”. *Journal of Statistical Computation and Simulation*, **70**, 273–288.
69. Chen, H. and Chen, J. (2001). “The likelihood ratio test for homogeneity in the finite mixture models”. *The Canadian Journal of Statistics*, **29**, 201-215.
70. Chen, J. and Cheng, P. (2000). The limiting distribution of the restricted likelihood ratio statistic for finite mixture models. *Chinese Journal of Applied Probability and Statistics*, **16**, 159-167.
71. Zhong, B., Chen, J. and Rao, J.N.K. (2000). “Empirical likelihood inference in the presence of measurement error”. *The Canadian Journal of Statistics*, **28**, 841-852.
72. Chen, J., Rao, J.N.K. and Sitter, R.R. (2000). “Efficient random imputation for missing data in complex surveys”. *Statistica Sinica*, **10**, 1153-1169.
73. Chen, H. and Chen, J. (2000). “Discussion on ‘Hybrid resampling methods for confidence intervals’ by Chung and Lai”. *Statistica Sinica*, **10**, 40-43.
74. Chen, H. and Chen, J. (2000). “Bahadur representation of the empirical likelihood quantile process”. *Journal of Nonparametric Statistics*, **12**, 645-665.
75. Chen, J. and Shao, J. (2000). “Biases and variances of survey estimators based on nearest neighbor imputation”. *Journal of Official Statistics*, **16**, 113-132.
76. Chen, J. and Sitter, R. (1999). “A pseudo empirical likelihood approach to the effective use of auxiliary information in complex surveys”. *Statistica Sinica*, **9**, 385-406.
77. Chen, J. (1998). “Penalized likelihood ratio test for finite mixture models with multinomial observations”. *The Canadian Journal of Statistics*, **26**. 583-599.

78. Susko\*, E., Kalbfleisch, J. and Chen, J. (1998). "Constrained Non-parametric Maximum Likelihood Estimation for Mixture Models". *The Canadian Journal of Statistics*, **26**, 601-617.
79. Chen, J. (1998). "Intelligent Search of  $2^{13-6}$  and  $2^{14-7}$  Minimum Aberration Designs". *Statistica Sinica*, **8**, 1265-1270.
80. Chen, J. and Lin, K. J. D. (1998). "On identifiability of a supersaturated design". *Journal of Statistical Planning and Inferences*, Special issue on the R.C. Bose Memorial Conference. **72**, 99-108.
81. Chen, G. and Chen, J. (1998). "Geometric Quality Inspection". *Statistica Sinica*, **8**, 135-149.
82. Sitter, R., Chen, J. and Moshe Feder (1997) "Fractional resolution and minimum aberration in blocked  $2^{n-k}$  designs". *Technometrics*, 382-390.
83. Chen, J. and Cheng, P. (1997). "A new approach to test the number of components in finite mixture models". *The Canadian Journal of Statistics*, **25**, 389-400.
84. Chen, G., Chen, J. and Chen Y. (1996). "The estimation of the cross point of two continuous cumulative distribution functions". (In Chinese) *Annals of Mathematics*, *17A*, 719-728.
85. Chen, G. and Chen, J. (1996). "Transformation method in finite populations calibrated with empirical likelihood". *Survey Methodology*, **22**, 139-146.
86. Chen, J. (1996). "On the conditional and mixture model approaches for matched pairs". *Journal of Statistical Planning and Inference*, **55**, 319-329.
87. Chen, J. and Kalbfleisch, J.D. (1996). "Penalized minimum distance estimates in finite mixture models". *The Canadian Journal of Statistics*, **24**, 167-176.
88. Chen, J. (1995). "Optimal rate of convergence for finite mixture models". *The Annals of Statistics*, **23**, 221-233.

89. Chen, J. and Cheng, P. (1995). "The Limit distribution of the restricted likelihood ratio statistic for finite mixture models". *Northeast Mathematical Journal*, **11**, 365-374.
90. Chen, J. (1994). "Generalized likelihood ratio statistics for testing the number of components in finite mixture models". *The Canadian Journal of Statistics*, **22** 387-400.
91. Chen, J. and Kalbfleisch, J.D. (1994). "Inverse problems in fractal construction: Hellinger distance method". *Journal of the Royal Statistical Society, B.*, **56**, 687-700.
92. Chen, J. and Sitter, R.R. (1993). "Edgeworth expansion and the bootstrap for stratified sampling without replacement from a finite population". *The Canadian Journal of Statistics*, **21**, 347-357.
93. Chen, J, Sun, D.X. and Wu, C.F.J. (1993). "Construction of complete sets of two-level fractional factorial designs with small sizes". *International Statistical Review*, *61*, 131-145.
94. Chen, J. and Shao, J. (1993). "Efficiency of the iterated weighted least squares estimates". *The Annals of Statistics*, **21**, 1071-1092.
95. Chen, J. and Qin, J. (1993). "Empirical likelihood in finite population and the use of auxiliary information". *Biometrika*, **80**, 107-116.
96. Chen, J. (1992). "Some results on  $2^{n-k}$  fractional factorial designs and search of minimum aberration designs". *The Annals of Statistics*, **20**, 2124-2141.
97. Chen, J. and Wu, C.F.J. (1991). "Some results on  $s^{n-k}$  fractional factorial designs of minimum aberration or optimal moments". *The Annals of Statistics*, **19**, 1028-1041.
98. Chen, J. and Lin, K.J.(1991). "On the identity relationships of  $2^{k-p}$  designs". *Journal of Statistical Planning and Inference*, **28**, 95-98.
99. Chen, J. and Qin J.(1990). "Some theoretical results on generalized regression quantiles". *Communications in Statistics*, **20**, 911-928.

100. Shi, X., Wu, C. F. J. and Chen, J. (1990). “Weak and strong representations for quantile processes from finite populations with application to simulation size in resampling inference”. *The Canadian Journal of Statistics*, **18**, 141-148.
101. Chen, J. (1987). “Consistency of projection pursuit density estimators” (in Chinese). *Journal of Systems Science and Mathematical Sciences*, **7**, 183-192.
102. Chen, J. (1986). “Consistency of curve fitting methods for the gamma distribution” (in Chinese). *Chinese Journal of Applied Probability and Statistics*, **2**, 128-133.
103. Chen, J. (1986). “Convergence rate of the Yule-Walker estimator in the AR model” (in Chinese). *Acta Mathematicae Applicatae Sinica*, **9**, 461-469.
104. Chen, J. (1985). “Large deviation of MLE in the multivariate case” (in Chinese). *Journal of Systems Science and Mathematical Science*, **5**, 192-200.
105. Chen, J. (1985). “Second order asymptotic efficiency of modified general statistics” (in Chinese). *Journal of the Graduate School, USTC, Academia Sinica*. **2**, 108-118.

### **Book Chapter**

1. Chen, J. (2008). “Some advances in finite mixture models”. *Frontiers of Biostatistics and Bioinformatics*. Edited by Ma, S. and Wang, Y. University of Science and Technology of China Press, Hefei, Anhui, 2008. 205-222.
2. Chen, J. and Li, Pengfei (2011). “The limiting distribution of the EM-test of the order of a finite mixture”. Book Chapter. *Mixture estimation and applications*. Edited by K.L. Mengersen, C.P. Robert and D.M. Titterton. Wiley. 49-67.

### **Proceedings/Non Refereed**

1. Chen, J. and Liu, Y. (2012). In JSM Proceedings, Alexandria, VA: American Statistical Association. 5162-5173.
2. Xu, C., Chen, J. and Mantel, H. (2010). "Penalized Likelihood Methods for Variable Selection in Analysis of Survey Data". Proceedings of the 2010 SSC Annual Meeting. The Survey Methods Section (SMS) of the Statistical Society of Canada (SSC)
3. Chen, J. (2008). "A rigorous statistician and passionate educator". *Statistica Sinica*, **18**, 401-404.
4. Tan, X., Chen, J., and Zhang, R. (2007). "Consistency of the constrained maximum likelihood estimator in finite normal mixture models". 2007 Proceedings of the American Statistical Association [CD-ROM], Alexandria, VA: American Statistical Association 2113-2119.
5. Chen, J. (2005). "Research contributions of the 2005 CRM-SSC Chen, J. and Li, P. (2011). "Tuning the EM-test for the order of finite mixture models". *The Canadian Journal of Statistics*. **39**, 389-404. winner". *Le. Bulletin du CRM*. **11** 12-13
6. Chen, H, Chen, J. and Kalbfleisch (2000). "A modified likelihood ratio test for homogeneity in finite mixture models". In *Proceedings of the Fifth Iranian Statistics Conference*, 1-16.
7. Susko\*, E., Kalbfleisch, J.D. and Chen, J. (1999). Computational approaches for Mixture Estimation. In *Proceedings of Interface, Models, Predictions and Computing*, Ken Berk and Mohsen Pourhadi, Editors, **31**, 432-438.
8. Chen, J. and Shao, J. (1999). "Variance estimation under nearest neighbor imputation". *ASA Proceedings of the Section on Survey Research Methods*. **2001** 122-130.
9. Chen, J. and Shao, J. (1997). "Biases and variances of survey estimators based on nearest neighbor imputation". *ASA Proceedings of the section on survey research methods*. 365-370.
10. Chen, G. and Chen, J. (1995). "Geometric Quality Inspection". *1994 Proceedings of the Section on Physical and Engineering Sciences*.

### **Papers submitted and preprints/technical reports**

1. Chen, Jiahua. Li, Pengfei. and Liu Yukun. “Sample-size calculation for tests of homogeneity”.
2. Cai, Song, Jiahua Chen and James V. Zidek. “Hypothesis testing in the presence of multiple samples under density ratio models”.
3. Chen, J. and Liu, Y. “Small Area Estimation under Density Ratio Model”.
4. Chen, J. “Consistency of the MLE under mixture models”.
5. Yu, X. and Chen, J. “Sequential ED-Design for Binary Dose-Response Experiment”.

### **Report for Industry**

1. Chen, J., Thompson, M. and Wu, C.B. (2001). “Design for the Expanded Survey of Divisions 3LNO.” *A report for Fishery Products International Inc.*
2. Chen, J., Thompson, M. and Wu, C.B. (2002). “Statistical Analysis for the FPI Expanded Survey of Divisions 3LNO.”. *A report for Fishery Products International Inc.*

### **Invited serial lectures**

1. July 5-6, 2014. East China Normal University, Shanghai China. Theory and applications of empirical likelihood.
2. July 1-3, 2013. East China Normal University, Shanghai China. Two day summer school on finite mixture models.
3. July 9-10, 2010. North East Normal University, Changchun, Jilin, China. Two day workshop on finite mixture models.
4. Nov 1, 2004-Nov 27, 2004. Department of Statistics, Nankai University. Short course on Empirical likelihood.
5. Dec 11, 2003-Jan 12, 2004. Department of Statistics, Nankai University. Short course on finite mixture models.

6. Gave 10 lectures to statistical faculty at Bowling Green State University in spring 1998. Topic: Empirical Likelihood method.
7. Gave 3 lectures to statistical faculty at University of Alberta in fall 1995. Topic: Mixture models.

### **Plenary talks or equivalent**

1. June 28, 2015. Consistency of MLE under mixture models. The 9th international conference on asymptotic theory in probability and large sample theory. University of Science and Technology of China. Hefei, China.
2. June 16, 2015. EM-test for finite mixture models. **Gold Medal Address**. 43rd Annual Meeting of the Statistical Society of Canada. Halifax, NS, Canada.
3. May 19, 2012. Methods and models for latent variables. Final Conference of PRIN 2008, May 17-18-19, 2012 - University of Naples Federico II, Italy. “EM-test in finite mixture models”.
4. June 9, 2011. International Workshop on Perspectives on High-dimensional Data Analysis. The Fields Institute. Toronto. “Advances in EM-test for Finite Mixture Models”.
5. May 1, 2011. The 5th Annual Meeting of the Prairie Network for Research in the Mathematical Sciences. Regina, Saskatchewan. “Likelihood based inference in finite mixture models”.
6. Dec 18, 2010. International Chinese Council of Mathematics. (45 mins talk). “EM-test in finite mixture models”.
7. May 1, 2008. The 3rd Annual Canadian Genetic Epidemiology & Statistical Genetics Meeting. Fields Institute, Toronto. “Extended Bayesian Information Criteria for Model Selection with Large Model Space”.

### **Invited Presentations (Conferences)**

1. July 30, 2015. Small Area Quantile Estimation. 60th World Statistics Congress – ISI 2015. Rio de Janeiro, Brazil.



2. July 2, 2015. How to estimate the prediction precision of a classifier. IMS-China International Conference on Statistics and Probability 2015. Kunming, China.
3. July 7, 2014. Building Statistical Methodology and Theory (in celebration of Jeff Wu's 65th birthday). Yunnan, China. "Statistical inference and numerical method in mixture models".
4. June 25, 2014. BIRS workshop 14w5011. "Building a classification model based on miRNA data".
5. May 25, 2014. SSC, Toronto, Ont. "Sample-size calculation for tests of homogeneity".
6. March 6, 2014. Victoria, BC. 3rd Annual Canadian Human and Statistical Genetics Meeting. "Imprinting test for disease-associated SNPs under mixture model".
7. Aug 3, 2013. Toronto, Ont, Canada. ICSA Canada Chapter Symposium. "Quantile and quantile function estimations under density ratio model".
8. July 7, 2013. Jilin University, China. The third international Biostatistics Workshop of Jilin University. "Quantile and quantile function estimations under density ratio model".
9. March 11, 2013. ENAR. Florida, USA. "Composite likelihood for the analysis of hidden Markov model".
10. Dec 18, 2012. Joint Workshop on Recent Development in Statistics & Biostatistics In Celebration of 75th Anniversary of the Polytechnic University, Hong Kong. "EM-test for finite normal mixture models".
11. Aug 3, 2012. Joint Statistical Meetings. San Diego. "Applying Empirical Likelihood for a Long Term Monitoring System Using Survey Data".
12. July 3, 2012. The second Institute of Mathematical Statistics Asia Pacific Rim Meeting. Japan. "Properties of the Adjusted Empirical Likelihood".

13. July 8, 2012. Satellite Meeting of IMS-Asia Pacific Rim Meeting. Tokyo University. “Advances in EM-test”.
14. June 7, 2012. Conference on Statistical Learning and Data Mining. University of Michigan, Ann Arbor, MI. “A Thresholding Algorithm for Order Selection in Finite Mixture Models”.
15. June 14, 2011. Annual Meeting of the Statistical Society of Canada. Wolfville, NS. “Tuning the EM-test for finite mixture models”.
16. Aug 3, 2010. Joint Statistical Meeting, Vancouver (Special topic contributed talk). “Testing the Order of a Finite Mixture”.
17. July 1, 2010. International Conference on Statistical Analysis of Complex Data, Kunming, Yunan, China. “Order Selection in Finite Mixture Models with Non-smooth Penalty”.
18. June 22, 2010. Applied Statistical Symposium of ICOSA. Indianapolis, USA. “Adjusted Empirical Likelihood with High Order Precision”.
19. May 28, 2010. University of Waterloo. Workshop In Celebration of the Contributions of Jack Kalbfleisch and Jerry Lawless to the Statistical Sciences. “Likelihood based statistical inference under finite mixture models.”
20. Mar 3, 2010. Workshop on finite mixture models, Edinburgh, UK. “Testing the order of finite mixture models with EM-test”.
21. Dec 4, 2009. Canada Mathematics Society, Winter Conference, Windsor, Ont, “Adjustment empirical likelihood with high order precision”.
22. Aug 3, 2009. ASA joint statistical meeting. Washington, DC. “Feature selection in GLM with large model space”.
23. July 8, 2009. International Conference on Financial Statistics and Financial Econometrics. Chengdu, China. “Feature selection in GLM with large model space”.
24. July 4, 2009. International Biometrics Research Conference. Anhui, China. “Feature Selection in Finite Mixture of Sparse Normal Linear Models in High Dimensional Feature Space”.

25. June 29, 2009. IMS-Pacific Rim Conference. Seoul, Korea. “Feature selection in GLM with large model space”.
26. March 16, 2009. ENAR. Antonio, Texas. “Feature selection in GLM with large model space”.
27. Aug 3, 2008. ASA joint statistical meeting. Washington State. “Empirical Likelihood Methods To Obtain Range Restricted Estimations”. (Memorial session to Professor Randy Sitter).
28. Aug 6, 2008. ASA joint statistical meeting. Washington State. “EM-Test for Finite Mixture Models”.
29. Feb 23, 2008. First Canada-Mexico Statistics Meeting. CIMAT, Guanajuato, Mexico. “Central Limit Theorem in Two-phase Sampling”.
30. June 25, 2007, Workshop at Banff International Research Station: “Extended Bayesian information criterion for model selection with large model space”.
31. June 14, 2005. Annual meeting of Statistical Society of Canada. “Contributions to finite mixture models”.
32. May, 2005. Variable selection with empirical likelihood. Workshop on Empirical Likelihood Methods, Ottawa, May 2005.
33. June 2, 2004. Annual meeting of Statistical Society of Canada. Montreal, Canada. “Confidence interval under unequal probability sampling for population with large proportion of zero values”.
34. July 21, 2004. International Chinese Statistical Association. Singapore. Modified likelihood in finite mixture models with a structure parameter.
35. July 24, 2004. International Chinese Statistical Association. Singapore. Fish abundance assessment using empirical likelihood.
36. July 16, 2004. International Biometric Conference. Cairns, Australia. Advances in the application of modified likelihood.

37. June 1, 2004. Annual meeting of Statistical Society of Canada at Montreal. Confidence interval under unequal probability sampling when the population contains a large number of zero values.
38. June 15, 2002. Fourth biennial international conference on statistics, probability and related areas. DeKalb, Illinois. Northern Illinois University. Modified likelihood ratio test for finite mixture models.
39. July 10, 2002. International conference on recent advances in survey sampling. (In honour of professor J.N.K. Rao). Carleton University. Ottawa, Canada. Empirical likelihood confidence interval for populations with large proportion of zero values.
40. June 3, 2002. Workshop on developments and challenges in mixture models, bump hunting and measurement error models. Cleveland, Case Western Reserves University. Empirical likelihood inference in the presence of measurement error.
41. May 29, 2002. Annals meeting of the Statistical Society of Canada, Application of a modified likelihood ratio test to a two sample mixture model.
42. Aug 19, 2001. The fifth ICSA international conference. Hong Kong. Sampling weight adjustment and empirical likelihood.
43. July 7, 2001. Statistics 2001. Fourth Canadian Conference in Applied Statistics, Concordia University. Sampling weight adjustment and empirical likelihood.
44. Dec 30, 2000. Joint meeting of IISA and India Statistical Society. Fractional Resolution and Minimum Aberration in Blocked  $2^{n-k}$  Designs.
45. Aug 22, 2000. The 5th Iranian Statistics Conference(Isfahan): Modified likelihood ratio test for finite mixture models.
46. Aug 17, 2000. ASA Annual meeting: Modified likelihood ratio test for finite mixture models.
47. June 2, 2000. ICSA Symposium (NJ, USA): Modified likelihood ratio test for finite mixture models.

48. August, 1999. ASA Annual meeting: Variance estimation under nearest neighbor imputation.
49. March 30, 1998, ENAR annual meeting: Large sample distribution of the likelihood ratio test for normal mixtures.
50. August 19, 1995, ICSA Annual meeting: On Penalized Likelihood Method in Finite Mixture Models.
51. August 15, 1994, ASA Annual Meeting: Geometric Assurance.
52. June 6, 1993, SSC Annual Meeting: A Transformation Method for Finite Population Sampling Calibrated by Empirical Likelihood.
53. May 24, 1993, IMS Research Workshop, South Carolina: Some Results in Finite Mixture Models.

#### **Invited Presentations (Curriculum)**

1. August 3, 2015. EM-test for finite mixture models. the Instituto de Calculo. Buenos Aires, Argentina.
2. July 6, 2015. EM-test for Finite Mixture Models. Qufu Normal University, ShanDong, China.
3. April 26, 2014. Small Area Quantile Estimation. Department of Statistics, Iowa State University, USA.
4. April 27, 2014. Quantile and quantile-function estimations under density ratio model. Department of Statistics, Iowa State University, USA.
5. Dec 15, 2014. EM-test and Related Issues. Department of Statistics, Auckland University, New Zealand.
6. Dec 11, 2014. Adjusted Empirical Likelihood and its Properties. Business School, Auckland University of Technology, New Zealand.
7. Oct 10, 2014. EM-test and Related Issues. Department of Mathematics and Statistics, Queen's University. Ontario.
8. Sept 30, 2014. EM-test and Related Issues. Department of Statistics, University of British Columbia.

9. Nov 18, 2013. University of Victoria. “Imprinting test for disease-associated SNPs under mixture model”.
10. Nov 1, 2013. Simon Fraser University. “Imprinting test for disease-associated SNPs under mixture model”.
11. June 28, 2013. Zhejiang University. “Partial order of uncertainty”.
12. June 26, 2013. Zhejiang University of Finance & Economics. “Quantile and quantile-function estimations under density ratio model”.
13. June 19, 2013. Institute of System’s Science, Academia Sinica. “Quantile and quantile-function estimations under density ratio model”.
14. June 18, 2013. Peking University. “Adjusted empirical likelihood”.
15. June 20, 2013. Beijing Normal University. “Composite likelihood for the analysis of hidden Markov model”.
16. March 15, 2013. McGill University. “Quantile and quantile-function estimations under density ratio model”.
17. Jan 18, 2013. Hong Kong University of Science and Technology. “Composite likelihood for the analysis of hidden Markov model”.
18. Jan 15, 2013. Hong Kong City University. “Quantile and quantile-function estimations under density ratio model”.
19. Jan 14, 2013. Hong Kong University. “Composite likelihood for the analysis of hidden Markov model”.
20. Jan 9, 2013. National University of Singapore. “Composite likelihood for the analysis of hidden Markov model”.
21. Jan 4, 2013. Eastern Normal University, Shanghai. “Theory and applications of the Adjusted Empirical Likelihood”.
22. November 20, 2012. University of British Columbia. “Properties of the Adjusted Empirical Likelihood”.
23. Nov 5, 2012. Oregon State University. “Properties and applications of the adjusted empirical likelihood”.

24. March 8, 2012. University of Victoria. “Advances in EM-test for Finite Mixture Models”.
25. October 27, 2011. University of Toronto. “Properties of the Adjusted Empirical Likelihood”.
26. March 18, 2011. University of Alberta. “Adjusted nonparametric likelihood with high order precision”.
27. September 18, 2010. SFU-UBC graduate student research workshop. “How did these papers start?”
28. July 12, 2010. Eastern China Normal University, Shanghai, China. “Likelihood based statistical inference under finite mixture models.”
29. July 4, 2010. Xi’an Jiaotong University, Shaanxi, China. “Extended Bayesian Information Criteria for Model Selection with Large Model Space”.
30. March 9, 2010. London School of Economics and Political Sciences. London, UK. “Generalized method of moment and the high order empirical likelihood”.
31. Oct 12, 2009. Penn State University. College Park, Pennsylvania. “Hypothesis test in finite mixture models”.
32. Oct 24, 2008. University of Missouri, Missouri, “EM-test in finite mixture models”.
33. Oct 23, 2008. University of Missouri at Kansas City, Missouri, “EM-test in finite mixture models”.
34. July 17, 2008. University of Science and Technology of China. Hefei, Anhui, PRC. “Adjusted empirical likelihood with high order precision”.
35. July 14, 2008. NorthEast Normal University, ChangChun, Jilin, PRC. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
36. March 24, 2008. Tamkam University, Taiwan. “EM-test in finite mixture models”.

37. March 14, 2008. University of South Australia, Adelaide, Australia. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
38. March 3, 2008. National Taiwan University, Taipei. “Adjusted Empirical Likelihood”.
39. March 2, 2008. Institute of Statistical Science, Academia Sinica, Taipei. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
40. Dec 26, 2007. University of Science and Technology of China. Hefei, Anhui. “EM-test in finite mixture models”.
41. Dec 6, 2007. SFU/UBC joint seminar: “EM-test in finite mixture models”.
42. Oct 26, 2007, Simon Fraser University. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
43. March 8, 2007. University of West Ontario. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
44. Feb 9, 2007. University of Victoria. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
45. Nov 7, 2006. McMaster University. “Adjusted Empirical Likelihood and Its Properties”.
46. Oct 18, 2006. University of North Carolina. “Adjusted Empirical Likelihood and Its Properties”.
47. July 9, 2006. Nankai University. “Analysis of performance measures in experimental designs using jackknife”.
48. March 27, 2006. Nanyang Technological University, Singapore. “Order selection in finite mixture models”.
49. Feb 20, 2006. University of Science and Technology. “Variable selection problem in finite mixture of regression models”.



50. Feb 27, 2006. Nanking University. “Variable selection problem in finite mixture of regression models”.
51. Dec 17, 2005. Centre de recherches mathematiques, Universite de Montreal. “Contributions to finite mixture models”.
52. Oct 23, 2005. Guangxi Normal University, China. “Results in finite mixture models”.
53. Sept 7, 2005. Nanyang Technological University, Singapore. “Variable selection problem in finite mixture of regression models”.
54. Dec 10, 2004. York University. “Recent development in finite mixture models”.
55. Nov 26, 2004. School of Mathematics, Nankai University. “Statistical method for fish abundance estimation”.
56. Nov 19, 2004. University of Science and Technology. “Universal validity of possible triangle of the IBD distribution in genetics”.
57. Nov 13, 2004. Department of applied mathematics, Tsinghua University. “Statistical method for fish abundance estimation”.
58. Nov 12, 2004. Institute of Systems Science. Academia Sinica, China. “Universal validity of possible triangle of the IBD distribution in genetics”.
59. September 30, 2004. University of Guelph. “Estimation of Fish Abundance”.
60. Oct 17, 2003. Department of Statistics and Department of Bio-Statistics, University of Michigan. Modified likelihood ratio test for finite mixture models.
61. Dec 22, 2003. Department of Statistics, Beijing University. Empirical likelihood confidence interval for populations with large proportion of zero values.
62. Dec 23, 2003. Institute of Statistical Science, Academia Sinica; Recent results on mixture models.

63. April 28-May 15, 2002. Institute of Statistical Science, Academia Sinica; Tamkang University, University of Taiwan, Tonghua University: Modified likelihood ratio test for two component finite mixture models.
64. March 7, 2002. John Hopkins University, Department of Mathematical Science, Modified likelihood ratio test for two component finite mixture models.
65. Sept 27, 2001. Department of Statistics, University of Manitoba. Modified likelihood ratio test for two component finite mixture models.
66. July 26, 2001. Institute of Systems Science, Academia Sinica. P.R.C. Modified likelihood ratio test for two component finite mixture models.
67. Aug 1, 2001. University of Science and Technology of China, P.R.C. Modified likelihood ratio test for two component finite mixture models.
68. July 22, 2001. Nankai University, P.R.C. Modified likelihood ratio test for two component finite mixture models.
69. June, 2000. Case Western Reserve University: Finite mixture models.
70. August 20, 1997, Anhui University: The bias and variance of the NNI imputation.
71. December 11, 1994, McGill University: On Mixture Model Approach in Analyzing Matched-Pairs Studies.
72. May 23, 1994, University of Chicago: Properties of Finite Mixture Models.
73. February 28, 1994, University of Michigan: Properties of Finite Mixture Models.
74. April 29, 1992, University of Manitoba, Winnipeg: On Minimum Aberration Designs.
75. April 13, 1992, Purdue University, Layfayat, Indiana: Empirical Likelihood in Finite Populations.
76. April 7, 1992, Institute of Mathematical Sciences, Berkeley, CA: Inverse Problem, A Hellinger Distance Method.

77. February 29, 1992, Bowling Green State University: Inverse Problem, A Hellinger Distance Method.

## GRANTS

- Natural Science and Engineering Research Council:  
Statistical methods for finite mixture, hidden Markov and density ratio models \$38,000/year, April 1, 2014, March 31, 2019. Acceleration Grant.
- Natural Science and Engineering Research Council:  
Statistical methods for finite mixture, hidden Markov and density ratio models \$40,000/year, April 1, 2014, March 31, 2017.
- Natural Science and Engineering Research Council:  
Regime-switching model, finite mixture model, empirical likelihood and other applied problems \$34,000/year, April 1, 2013, March 31, 2014. (Nominated to apply for DAS).
- Networks of Centres of Excellence:  
Statistical methods for complex survey data.  
\$16,800 for year 2011. (My share).
- NSERC and FPInnovations. Collaborative Research and Development Grant: “Forest products stochastic modeling group”. \$85,000 YEAR 2011; \$100,000 YEAR 2012; \$100,000 YEAR 2013. Principle applicant: Jim Zidek.
- Natural Science and Engineering Research Council:  
Statistical Genetics, Statistical Finance and other Statistical Problems. Acceleration Grant. \$40,000/year, April 1, 2008, March 31, 2011.
- Natural Science and Engineering Research Council:  
Statistical Genetics, Statistical Finance and other Statistical Problems. \$41,000/year, April 1, 2008, March 31, 2013.
- Natural Science and Engineering Research Council:  
Problems in mixture models, survey sampling and statistical genetics. \$36,000/year, April 1, 2003, March 31, 2008.

- MITACS:  
Statistical methods for complex survey data. \$100,000 (14 researchers)  
April 1, 2003-March 31, 2006. Extended to March, 2010.
- Department of Fishery and Oceans:  
Inference for sequential population analyses (SPA) using penalized likelihood.  
(jointly with Drs. Noel Cadigan and Stratis Vavaris, DFO)  
\$24,000/year, Sept 1, 2001 – Aug 31, 2004.
- Department of Fishery and Oceans:  
Model Assisted approach in of fish abundance surveys design and analysis. (jointly with Professors Mary Thompson and Changbao)  
\$15,000/year, April 1, 2002 – March 31, 2003.
- Natural Science and Engineering Research Council:  
Inference for irregular models  
\$27,300/year, Apr. 1, 1999– March 31, 2003.
- Industrially Oriented Research:  
Process and product quality improvement through statistical method  
(jointly with Professor J. F. Lawless and others)  
\$57,200/year, Jan. 1, 1995 – Dec. 31, 1997.
- Natural Science and Engineering Research Council:  
Finite mixture models and finite population problems.  
\$18,000/year, Apr. 1, 1995 – March 31, 1999.
- Natural Science and Engineering Research Council:  
Problems in experimental design and statistical inference.  
\$14,500/year, Apr. 1, 1992 – Mar. 31, 1995.
- Institute for Improvement in Quality and Productivity  
\$3,000, 1990-

### **GRANTS as collaborator**

- CIHR. Evaluation of circulating small RNA markers as simple blood test biomarkers for detecting and predicting outcomes in oral cancer. \$163,883/year. 2014-2017. Principle applicants: Cathie Garnis and Catherine Poh.

- Genome BC Strategic Opportunities Fund. Development of an Actionable Molecular Test for Risk Assessment of Oral Precancers. \$133,300. July 1st, 2013 to December 31st, 2014. Co-applicant. Principle applicant: Catherine Poh.

## GRADUATE STUDENT SUPERVISION

### Supervision (Ph.D):

1. Susko, Edward (1992-1996). (co-supervisor: Jack Kalbfleisch). Thesis: Non-parametric Maximum Likelihood Estimators in Mixture Models. **Pierre Robillard Award Winner (1996); SSC-CRM Prize Winner 2011**. Position: Professor at Delhousie University.
2. Cadigan, Noel (1994-1999). Thesis: Statistical inference about fish abundance: An approach based on research survey data. Position: Scientist at Department of Fisheries and Oceans.
3. Julie Horrocks (1996-1999). (co-supervisor: Mary Thompson). Thesis: Double Barrier Models for Length of Stay in Hospital. Position: Associate Professor at University of Guelph.
4. Fu, Yuejiao (2000-2004). (co-supervisor: Jack Kalbfleisch). Statistical Inference for Mixture Models. Position: Associate Professor at York University, Canada.
5. Feng, Zeny (2002-2004). (co-supervisor: Mary Thompson). Statistical Method in Affected Sib Pairs Analysis. **Pierre Robillard Award Winner (2004)**. Position: Associate Professor at University of Guelph.
6. Wenyu, Jiang, (1999-2004). (co-supervisor: Jack Kalbfleisch). Resampling Method for Survival Models and U-Statistics. Position: Assistant Professor at Queen's University.
7. Pan, Jianmin (2000-2005). Modified Information Criterion for Change Point Problems. Position: Research Professor at University of Louisville.
8. Khalili, Abbas-Ali (2001- 2005). Model Selection and Variable Selection Problems in Finite Mixture Models. Position: Assistant Professor at McGill University.

9. Mulayath Variyath, Asokan (2003-2006). (co-supervisor: Bovas Abraham). Variable Selection in Generalized Linear Models by Empirical Likelihood. Position: Assistant Professor at Memorial University.
10. Li, Pengfei (2004-2007). (co-supervisor: Paul Marriot). Hypothesis Testing in Finite Mixture Models. Position: Assistant Professor at University of Waterloo.
11. Carrillo Garcia, Ivan (2004-2008). (co-supervisor: Changbao Wu). Analysis of Longitudinal Surveys with Missing Responses. Position: Postdoctor, NISS.
12. Xu, Chen (2007-2012 Sept). Applications of Penalized Likelihood Methods for Feature Selection in Statistical Modeling. Postdoctor at Penn State University.
13. Cai, Song (2010–2014, May 13). Co-supervisor: Jim Zidak. On Dual Empirical Likelihood Inference under Semiparametric Density Ratio Models in the Presence of Multiple Samples. Faculty member at Carleton University.
14. Huang, Yi (2010–). Passed Stat 547. Proposal done Nov 22, 2012. In progress.
15. Yu, Xiaoli (2011–). Passed Stat 547. Proposal done Nov 3, 2014. In progress
16. Ma, Jun (2012–). Ph.D candidate. Department of Economics. Succeeded at proposal. Guest supervisor (committee member). Graduated Aug 2014.
17. Ho, Yin Ho (2014 Sept–). Just started.

### **Supervision (Outside UBC and UW)**

1. Liu, Yukun (2007–2008). (co-supervisor: Runzhu Zhang, special arrangement with Nankai University). Adjusted Empirical Likelihood with High-Order Precision.
2. Tan, Xianmin (2002–2005). (co-supervisor: Runzhu Zhang, special arrangement with Nankai University). Parameter estimation and applications of the finite mixture model.

3. Li, Dan (2007–2008). Joint supervision. No thesis. Central University of Finance.
4. Li, Xiao (2008–2009). Joint supervision. Constructing nonparametric likelihood confidence regions with high-order precisions. University Science and Technology of China.
5. Zou, Wei (2011–2012). Joint supervision. Markov regime-switching model in crude oil market: Comparison of composite likelihood and full likelihood. Central University of Finance.
6. Wang, Lei (2012–2013). Joint supervision. Second-order Properties of Adjusted Empirical Likelihood for Constructing Confidence Region with Moment Restrictions. Degree completed in June 2014.

#### **Supervision (Master’s)**

1. Mak Yat Hang (1997–1999). Generalization of Penalized Likelihood Ratio Test for Binomial Mixture models. Current Position: unknown.
2. Jiang, Wenyu, (1998–1999). Hypothesis test for finite mixture models.
3. Fu, Yuejiao (1999–2000). Finite mixture models.
4. Romero Hidalgo, Sandra, (1999–2000). Linkage analysis based on sib-pairs. Current Position: unknown.
5. Yang, Ju (2000–2001). Empirical likelihood and Logistic regression model. Current Position: World Health Organization. Technical Officer, Global Polio Eradication Initiative World Health Organization, Geneva, Switzerland.
6. Chen, Hong, (2002–2004). Estimate the True Incidence of Hepatitis A in Canada. Current Position: Statistician in General Hospital of Toronto.
7. Huang, Yi (2008–2010). Completed with Master’s degree. Thesis: Properties of Empirical and Adjusted Empirical Likelihood. Current Ph.D candidate.
8. Hu, Zhiyuan (2008–2009). Withdraw.

9. Lv, Libo (2009–2010). Graduated with Master’s degree. Current position: KnowledgeBased Marketing, INC. Thesis: Approximate Methods for Joint Models in Longitudinal Studies.
10. Yu, Xiaoli (2009–2011). Completed with Master’s degree. Project: Group Sequential Methods in Clinical Trial Research. Current Ph.D candidate.
11. Liang, Yitian (2009–2011). Completed with Master’s degree. Thesis. Review of Generalized Method of Moments. Current Ph.D candidate in the Sauder School of Business at UBC.
12. Zhao, Yichen (2014–). Building a classification model on miRNA data (tentative).

### **Undergraduate**

1. Shangari\*, D. Undergraduate NSERC Summer RA. 2011, 2012 (May-August)
2. Kim, Hyun Kyung (Sally). Undergraduate NSERC Summer RA. 2014 (May-August)

### **Postdoctorate**

1. Li, Pengfei (2008Jan–2008June). Hypothesis Testing in Finite Mixture Models.
2. Khalili, Abbas-Ali (2007Jan–2009July). Feature Selection in Finite Mixture of Sparse Normal Linear Models in High Dimensional Feature Space.
3. Jin, Zi (2010Oct–2011Sept). Composite likelihood approach to finite mixture of multivariate normal distributions.
4. Liu, Yukun (2012Jan–2012June). Quantile estimation under DRM.
5. Li, Shaoting (2014Nov–2015Oct). Inference problems in finite mixture models.

### **Outside Ph.D. students (external examiner)**



1. Li, Mengxin. On neural spike sorting with mixture models. Department of Applied Probability and Statistics, National University of Singapore. March, 2010.
2. Ahmed, Zahoor. Generalized multivariate ratio and regression estimators for multi-phase sampling. National College of Business Administration & Economics, Lahore. November, 2007.
3. Chen, Yumin. Statistical study of permutation test for quantitative trait loci detection. Department of Applied Probability and Statistics, National University of Singapore, 2009.
4. Liu, Xinyi. A New Hidden Markov-Switching Volatility Model. Department of Economics. Nanyang Technological University. March, 2007.
5. Li, Wenyun. Interval Mapping of Human QTL Using Sib Pair Data, Department of Applied Probability and Statistics, National University of Singapore, 2006.
6. Lu, Wen Wilson. Confidentiality and Variance Estimations in Complex Surveys. Department of Statistics and Actuarial Science, Simon Fraser University, 2004.
7. Masoud Asgharian Dastenaiei. Modeling Covariance in Multi-Path Change Point Problems. Department of Mathematics and Statistics, McGill University, Montreal. 1998.
8. Zhong, C.X.B. Empirical Likelihood of Inference for Finite Populations with Auxiliary Information Using Stratified Random Sampling. Department of Mathematics and Statistics, Carleton University, Ottawa. 1997.
9. Bingham, D. R. Some theoretical results for fractional factorial split-plot designs. Department of Mathematics and Statistics, Simon Fraser University. 1998.

### **Thesis committees**

#### **Ph.D. students**

1. Zhou, Guohai. (Department of Statistics, UBC). Multivariate one-sided tests for mixed effects models with complex data. Nov 10, 2014.
2. Xu, Jinwen. (Vancouver School of Econometrics, UBC). Three Essays on Applied Econometrics. June 30, 2014. University Examiner.
3. Krupskii, Pavel. (Department of Statistics, UBC). Structure factor copulas and tail inference. June 16, 2014.
4. He, Chen. (Electrical & Computer Engineering, UBC). MIMO Backscatter RFID Systems: Performance Analysis, Design and Comparison. Mar. 4, 2014. University Examiner.
5. Zhai, Yongliang (Department of Statistics, UBC). Statistical Inference of Human Population Trees and Language Trees. Proposal: Nov 29, 2013. Advisory committee.
6. Yulai Wan. (Sauder School of Business, UBC). Essays on transportation economics and policy. July 25, 2013.
7. Zhang, XueKui. (Department of Statistics, UBC). "Mixture models for analysing high throughput sequencing data". July 2011. UBC.
8. Saul Davis. (Department of Astronomy, UBC). Progress in globular cluster research: insights from NGC 6397 and Messier 4. Defence, September 2008. UBC.
9. Nagy, Bela. (Department of Statistics, UBC). Valid estimation and prediction inference in analysis of a computer model. Defence, June 2008.
10. Yan, Guohua. (Department of Statistics, UBC). June 18, 2008.
11. Shah, Sohrab P. (Department of Computer Science, UBC). Model based approaches to array CGH data analysis. Defense, August, 2008.
12. Xu Wang Statistical inference for drug discovery data. Defence, April 2007.
13. Guixing Wu(Electrical and Computer Engineering). On the Design and analysis of Quantization-based Digital Watermarking Systems. Defence, Jan 17, 2006.

14. Mehri Mehrjoo (Electrical and Computer Engineering). Delay Analysis of VoWLAN. Proposal July, 2005.
15. Atef Abdrabou (Electrical and Computer Engineering). Quality-of-Service Routing for UWB AD-hoc Networks. Proposal June, 2005.
16. Fen Hou (Electrical and Computer Engineering). An Efficient Video Transmission Scheme over Wired-cum-Wireless Networks. Proposal May, 2005.
17. Nawa, Victor Mooto. "Analysis of Development Trajectories and Binary Longitudinal Data". Completed December 2004.
18. Yanmin Sun (System's Design, Ph.D). Classification with Imbalanced Class Distribution. Proposal February, 2004. Completed April 27, 2007.
19. Jiang, Ju (System's Design Ph.D). Cooperating Team of Reinforcement Learning Agents. Proposal Oct 2003. Completed March 22, 2007.
20. Sun, Wei (Electrical Engineering Ph.D). Multiple-Access Digital Watermarking Systems: Information-Theoretic Analysis. Proposal April 2004.
21. Denise Babineau. Goodness of Fit Tests for Event History Models when Responses are Interval Censored or Truncated. Proposal July 2003.
22. Zhang, Yuedong (Geography). Water Management System in China. Defense Aug. 2002.
23. Xu, Jiaqiong (Statistics). Multivariate Outlier Detection and Process Monitoring. Defence Jan, 2004.
24. He, Xiang (Systems Design). Generalized Attributed Hypergraph for Automatic Dynamic 3D Scene Modeling. Proposal Aug. 1999. Defence Aug. 2002.
25. Niu, Peiyi (Systems Design). 3-D Model Building by Information-directed Structure Light. Proposal Aug. 1999. Defence Aug. 2002.
26. Zhu, Hongmei (Applied Math). Courant's Nodal Line Theorem and its Discrete Counterparts. 2000.

27. Yang, Zejiang (Statistics). Multiple Roots of Estimating Functions and Applications. 2000.
28. Gao, Jiangong (Electrical and Computer Engineering). Analysis and Design of Lossless Image Coding Systems. Aug. 1, 2000.
29. Ling, Chi Hung Alan (C & O). Pairwise Balanced Designs and Related Codes. 1997.
30. Qin, Jing (Statistics). Empirical Likelihood and Semi-parametric Models. 1993.
31. Sun, Xiaodong (Statistics). Estimation Capacity and Related Topic in Experimental Designs. 1993.
32. El-Haddad, John (Statistics). Outliers and Time Series Modeling. 1992.
33. Chen, Xiaoming (Statistics). Properties of Models for Computer Experiments. 1996.
34. Newcombe, Pat (Statistics). Issues in the Use of Double Exponential Autoregressive (1) Models. 1995.
35. Yang Wong (Systems Design). High-order Pattern Discovery and Analysis of Discrete-valued Data Sets. 1997.

**Master's students:**

1. Liu, Lili (System's Design). A Globally Optimal Algorithm for Class-Dependent Discretization of Continuous Data. December 2004.
2. Eleanor Bingyan Huang (Chemistry). Statistical Experimental Design for Optimization and Understanding of Supercritical Fluid Extraction of Organic Contaminants from Soil Samples. 1994.
3. Dickson, Robert, J. (Statistics). The Estimation of Lyapunov Exponents for Systems Undergoing Occasional Random Shocks. 1994.

**Chairing Ph.D thesis defence**

1. Nishant Chandgotia. Mathematics. Markov Random Fields, Gibbs States and Entropy Minimality. 2015.
2. Pailing, Patrica. (Psychology, UW). ERP Investigations of Error Monitoring: Performance, Motivation and Personality Effects on the Error-Related negativity. 2004.
3. 2008, June 25. (Mathematics, UBC).
4. April 3, 2007, (Mathematics, UBC). Topics in Orbifold Chow Rings  
Candidate: Yunfeng Jiang.

### **TEACHING ACTIVITIES**

#### **(a) Graduate**

UW

Spring 1991	Stat 942B:	Approximation Theorems
Winter 1993	Stat 942B:	Approximation Theorems
Fall 1994	Stat 833:	Stochastic Processes
Fall 1995	Stat 833:	Stochastic Processes
Fall 1996	Stat 833:	Stochastic Processes
Fall 2001	Stat 833:	Stochastic Processes
Fall 2003	Stat 833:	Stochastic Processes
Fall 2006	Stat 833:	Stochastic Processes
Spring 1997	Stat 942B:	Approximation Theorems
Spring 1998	Stat 942B:	Approximation Theorems
Fall 2000	Stat 946A:	Approximation Theorems
Spring 1999	Stat 942A:	Statistical Genetics
Spring 1998	Stat 690B:	Statistical Genetics (reading course)
Spring 1999	Stat 690A:	Resampling method (reading course)
Spring 2000	Stat 946D:	Statistical Genetics (reading course)
Winter 2002	Stat 908:	Mathematical Statistics
Winter 2003	Stat 908:	Mathematical Statistics
Winter 2005	Stat 908:	Mathematical Statistics

UBC

Fall 2007	Stat547C	Approximation Theorems
Fall 2007	Stat560	Mathematical Statistics
Fall 2008	Stat560	Mathematical Statistics
Jan 2009	Stat561	Mathematical Statistics
Sept 2010	Stat522	Approximation Theorems
Jan 2014	Stat561	Mathematical Statistics
Jan 2015	Stat561	Mathematical Statistics
Jan 2015	Stat522	Approximation Theorems (half term)

(b) **Undergraduate**

UW

Stat 230:	Probability	Fall 1993; 1994; 1995; 1998; 1999; 2000 Winter 1994; 1995, Spring 1998; 2000
Stat 240:	Probability	Fall 1998, Winter 1996
Stat 231:	Statistics	Fall 1992, Winter 1993, Spring 1992
Stat 330:	Distribution theory	Winter, 1997; 1999
Stat 322/362:	Sampling theory & Experimental design	Fall, 2001; 2002
Stat 322/332/362:	Sampling theory & Experimental design	Fall, 2006
Stat 332:	Sampling theory	Spring, 1999; 2000
Stat 333:	Applied probability	Fall 1992; 1993; 1996; 2002; 2003 Winter 1995; 1996; 2001; 2003 Spring 1995; 1997; 2004
Stat 433 (833):	Stochastic Processes	Fall 1994; 1995; 1996; 2001; 2003; 2006

UBC

Stat302:	Intro. prob. theory	Jan-April 2011.
Stat460/560:	Mathematical Statistics	Fall 2007, 2008, 2009.
Stat461/561:	Mathematical Statistics	Jan 2009, 2014, 2015.
Stat404	Experimental Design	Jan 2010, Sept 2011.
Stat344	Sampling Survey	Jan 2012, Sept 2012, Sept 2014.

**PROFESSIONAL SERVICE**

## Committees

UBC	
Jan 2015	Admission committee (chair)
July 2014- June 2015	Active learning committee
July 2014- June 2015	Curriculum committee for Stat560, 561, 547
Jan 2014	Admission committee
Sept 2013- 2010:	Faculty DACOPAT representative (for tenure and promotion)
July 1, 2008 - Dec 31, 2012	University Scholarship
July 1, 2007 - Dec 31, 2012	Departmental Seminar
July 1, 2007 - July 2010	Graduate operations committee
UWaterloo	Faculty DACOPAT representative (for tenure and promotion)
July 2003 - Aug 2005	
July 2002 - June 2003	Associate Chair for Graduate Studies
July 2001 - June 2002	Graduate Operations Committee
July 2000 - June 2001	Comprehensive Committee, Program Committee
July 1999 - June 2000	Comprehensive Committee, Chair Search Committee
July 1998 - June 1999	Seminar Chair, Program Committee
July 1996 - June 1997	Hiring Committee, Library representative
July 1994 - June, 1996	Programs Committee
Sept 1993 - June, 1995	Hiring Committee
July 1993 - June 1994	Member, Graduate Student Comprehensive Committee
July 1992 - June 1993	Chair, Seminar Committee
May 1992 - June 1994	Member, Seminar Committee
July 1991 - June 1992	Member, Graduate Committee
	Editor, Technical Report Series

## Memberships in Societies, Institutes and Centres

Institution of Mathematical Statistics  
The American Statistical Association  
The Statistical Society of Canada  
International Chinese Statistical Association

## Refereeing Activities - Journals (Incomplete)

Annals of Institute of Statistical Mathematics



Annals of Statistics  
Biometrika  
Communications in Statistics  
Journal of America Statistical Association  
Journal of Applied Statistical Science  
Journal of Computational and Graphical Statistics  
Journal of Engineering for Industry  
Journal of Statistical Planning and Inferences  
Statistica Sinica  
Survey Methodology  
Technometrics

### **Refereeing Activities - Grants**

Natural Science and Engineering Council of Canada;  
National Science Foundation, U.S.  
Research Grant Council, Hong Kong

## **COMMUNITY SERVICE**

- Member for ranking scholarship applicants on behalf of Faculty of Graduate Studies (Nov 2010).
- Member for ranking post-doctoral applicants to assist PIMS (Jan 2011).
- External review of Canadian Institutes of Health Research, 2011.
- Adjudication Committee member of University of British Columbia (graduate student scholarship), 2010.
- Invited member of Canadian Institutes of Health Research, genetics panel. 2009.
- President of the Section of Survey Methodology, the Statistical Society of Canada. (2008)
- President of the International Chinese Statistical Association (2005–2006).
- Board member of the International Chinese Statistical Association (2001–2003).

- Membership committee of *International Chinese Statistical Association* from Jan, 1998–Jan 2000.
- Member of Grant Selection Committee of the Natural Science and Engineering Research Council of Canada. 1999–2002.
- Committee member of the Canadian Mathematics Competition. 1998–2001
- Vice president of Chinese Professional Associate at Canada’s Technology Triangle (2003–2004).
- President of Chinese Professional Associate at Canada’s Technology Triangle (2001–2003).
- Initiated and organized Chinese summer school in 1995, 1996.
- Advisory Committee Member of IMS workshop on Workshop on Developments and Challenges in Mixture Models, Bump Hunting and Measurement Error Models. June 2 – 4, 2002 Dively Center, Case Western Reserve University Cleveland, Ohio
- Organizer of a workshop at Banff International Research Station: “Statistical Analysis of High-Throughput Genetic Data”. Sunday, June 24 – Friday, June 29, 2007.
- Program committee member: Workshop on Statistical Genomics (June 1–28, 2009), National University of Singapore.
- Program committee member: International Biostatistics Research Conference. July 3–7, 2009; University of Science and Technology of China.
- Organized Invited Sessions for JSM, IMS-Pacific, SSC (2009).
- Co-Organizer for Canadian Mathematical Society, Dec 3–5, 2009. Windsor, Ontario.
- Co-Organizer for High Dimensional Data Analysis, March 23–25, 2013. Vancouver, BC.
- Member of organization committee of ICOSA Canada Chapter Symposium, Aug 2–3, 2013. Toronto, Ontario.

- Member of organization committee: Building Statistical Methodology and Theory July 7–9, 2014 The conference is held on the occasion of the 65th birthday of Dr. C.F. Jeff Wu.

Updated April 2015