

# C U R R I C U L U M   V I T A E

## JIAHUA CHEN

Department of Statistics University of British Columbia  
Vancouver BC V6T 1Z2  
604 822 1848 (phone), 604 822 6960 (Fax)

### 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, Statistical Genetics, Empirical Likelihood, Sample Survey, Experimental Design, Asymptotic Theory

## HONOURS

1. Faculty of Mathematics Fellowship, University of Waterloo: May 2005 – April 2008.
2. 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.
3. Elected fellow of the Institute of Mathematical Statistics, 2005.
4. Elected fellow of the American Statistical Association, 2009.
5. Canada Research Chair at Application of Finite Mixture Models in Statistics Genetics. Tier I. University of British Columbia (2007-2013).

## MAJOR COMMUNITY SERVICES

- Editor: the Canadian Journal of Statistics, 2010-2012.
- Invited member of the Engineering and Physical Science Research Council, Peer Review College, 2006-2009.
- Invited member of the Canadian Institutes of Health Research, Genetics Panel, 2009.
- 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 panel review committee, 2006.

- 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.
- Associate Editor of *Quality Technology and Quantitative Management*. Jan 2003-Dec 2009.

## PUBLICATIONS

See Publication link.

### Invited serial lectures

1. July 9-10, 2010. North East Normal University, Changchun, Jilin, China. Two day workshop on finite mixture models.
2. Nov 1, 2004-Nov 27, 2004. Department of Statistics, Nankai University. Short course on Empirical likelihood.
3. Dec 11, 2003-Jan 12, 2004. Department of Statistics, Nankai University. Short course on finite mixture models.
4. Gave 10 lectures to statistical faculty at Bowling Green State University in spring 1998. Topic: Empirical Likelihood method.
5. Gave 3 lectures to statistical faculty at University of Alberta in fall 1995. Topic: Mixture models.

### Plenary talks

1. June 9, 2011. International Workshop on Perspectives on High-dimensional Data Analysis. The Fields Institute. Toronto. Advances in EM-test for Finite Mixture Models
2. May 1, 2011. The 5th Annual Meeting of the Prairie Network for Research in the Mathematical Sciences. Likelihood based inference in finite mixture models.
3. Dec 18, 2010. International Chinese Council of Mathematics. (45 mins talk, prestigious). “EM-test in finite mixture models”.

## Invited Presentations (Conferences)

1. June 14, 2011. Annual Meeting of the Statistical Society of Canada. Wolfville, NS. Tuning the EM-test for finite mixture models
2. Aug 3, 2010. Joint Statistical Meeting, Vancouver (Special topic contributed talk). “Testing the Order of a Finite Mixture”.
3. July 1, 2010. International Conference on Statistical Analysis of Complex Data, Kunming, Yunan, China. “Order Selection in Finite Mixture Models with Non-smooth Penalty”.
4. June 22, 2010. Applied Statistical Symposium of ICOSA. Indianapolis, USA. “Adjusted Empirical Likelihood with High Order Precision”.
5. May 28, 2010. Workshop In Celebration of the Contributions of Jack Kalbfleisch and Jerry Lawless to the Statistical Sciences. “Likelihood based statistical inference under finite mixture models.”
6. Mar 3, 2010. Workshop on finite mixture models, Edinburgh, UK. “Testing the order of finite mixture models with EM-test”.
7. Dec 4, 2009. Canada Mathematics Society, Winter Conference, Windsor, Ont, “Adjustment empirical likelihood with high order precision”.
8. Aug 3, 2009. ASA joint statistical meeting. Washington, DC. “Feature selection in GLM with large model space”.
9. July 8, 2009. International Conference on Financial Statistics and Financial Econometrics. Chengdu, China. “Feature selection in GLM with large model space”.
10. July 4, 2009. International Biometrics Research Conference. Anhui, China. “Feature Selection in Finite Mixture of Sparse Normal Linear Models in High Dimensional Feature Space”.
11. June 29, 2009. IMS-Pacific Rim Conference. Seoul, Korea. “Feature selection in GLM with large model space”.
12. March 16, 2009. ENAR. Antonio, Texas. “Feature selection in GLM with large model space”.

13. Aug 3, 2008. ASA joint statistical meeting. Washington State. “Empirical Likelihood Methods To Obtain Range Restricted Estimations”. (Memorial session to Professor Randy Sitter).
14. Aug 6, 2008. ASA joint statistical meeting. Washington State. “EM-Test for Finite Mixture Models”.
15. May 1, 2008. 3rd Annual Canadian Genetic Epidemiology & Statistical Genetics Meeting. Field Institute, Toronto. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
16. Feb 23, 2008. First Canada-Mexico Statistics Meeting. CIMAT, Guanajuato, Mexico. “Central Limit Theorem in Two-phase Sampling”.
17. June 25, 2007, Workshop at Banff International Research Station: “Extended Bayesian information criterion for model selection with large model space”.

### **Invited Presentations (Curriculumms)**

1. March 18, 2011. University of Alberta. “Adjusted nonparametric likelihood with high order precision”.
2. September 18, 2010. SFU-UBS graduate student research workshop. “How did these papers start?”
3. July 12, 2010. Eastern China Normal University, Shanghai, China. “Likelihood based statistical inference under finite mixture models.”
4. July 4, 2010. Xi’An Jiaotong University, Shaanxi, China. “Extended Bayesian Information Criteria for Model Selection with Large Model Space”.
5. March 9, 2010. London School of Economics and Political Sciences. London, UK. “Generalized method of moment and the high order empirical likelihood”.
6. Oct 12, 2009. Penn State University. College Park, Pennsylvania. “Hypothesis test in finite mixture models”.
7. Oct 24, 2008. University of Missouri, Missouri, “EM-test in finite mixture models”.

8. Oct 23, 2008. University of Missouri at Kansas City, Missouri, “EM-test in finite mixture models”.
9. July 17, 2008. University of Science and Technology of China. Hefei, Anhui, PRC. “Adjusted empirical likelihood with high order precision”.
10. July 14, 2008. NorthEast Normal University, ChangChun, Jilin, PRC. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
11. March 24, 2008. Tamkang University, Taiwan. “EM-test in finite mixture models”.
- March 14, 2008. University of South Australia, Adelaide, Australia. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
12. March 3, 2008. National Taiwan University, Taipei. “Adjusted Empirical Likelihood”.
13. March 2, 2008. Institute of Statistical Science, Academia Sinica, Taipei. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
14. Dec 26, 2007. University of Science and Technology of China. Hefei, Anhui. “EM-test in finite mixture models”.
15. Dec 6, 2007. SFU/UBC joint seminar: “EM-test in finite mixture models”.
16. Oct 26, 2007, Simon Fraser University. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
17. March 8, 2007. University of West Ontario. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.
18. Feb 9, 2007. University of Victoria. “Extended Bayesian Information Criterion for Model Selection with Large Model Space”.

## GRANTS

- 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. 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.

## **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)**. Position: Associate 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: Assistant 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: Assistant 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 Alberta.

11. Carrillo Garcia, Ivan (2004-2008). (co-supervisor: Changbao Wu). Analysis of Longitudinal Surveys with Missing Responses. Position: Scientist at Statistics Canada.
12. Xu, Chen (2007-). Passed Stat 547 and comprehensive test (2010).
13. Cai, Song (2010-). Passed Stat 547. In progress.
14. Huang, Yi (2010-). Passed Stat 547. In progress.

### **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. No thesis. University Science and Technology of China.

### **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.
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.

### **Memberships in Societies, Institutes and Centres**

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

### **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-).
- 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 to 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.

Incomplete but short CV