# Li Xing | CV

[Saskatoon, SK, Canada] [li.xing@math.usask.ca]

## Education

Ph.D. in Statistics — [The University of British Columbia, Vancouver, Canada] [09/2008 — 09/2014]

M.Sc. in Statistics — [Simon Fraser University, Burnaby, Canada] [09/2005 — 05/2007]

M.Sc. in Mathematics — [The University of British Columbia, Vancouver, Canada] [09/2003 — 08/2005]

B.Sc. in Applied Mathematics — [Hebei University of Technology, Tianjin, China] [09/1996 — 06/2000]

## Research Interests

- Analysis of High Dimensional Data
- Bayesian Methods
- Predictive Models
- Bioinformatics
- Machine Learning
- Optimal Design

## Professional Appointments

Mathematics and Statistics Department, The University of Saskatchewan (Saskatoon, Canada)

- Assistant Professor [07/2019 — present]

Institution on Aging & Lifelong Health, The University of Victoria (Victoria, Canada)

- Research Scientist [03/2019 — 03/2020]
- Research Associate [07/2018 — 02/2019]

Mathematics and Statistics Department, The University of Victoria (Victoria, Canada)

- NSERC and UVic Postdoctoral Fellow [07/2017 — 12/2018]

US Food and Drug Administration (FDA) (Silver Spring, MD, USA)

- PhD Statistician/Visiting Associate [09/2016 — 07/2017]

Department of Biostatistics, Indiana University-Purdue University Indianapolis (Indianapolis, USA)

- NSERC Postdoc and IUPUI Adjunct Faculty [01/2016 — 08/2016]
- NSERC and IUPUI Postdoctoral Fellow [10/2014 — 01/2016]

The COAH and the Welch Center, Johns Hopkins University (Baltimore, USA)

- Biostatistician [03/2012 — 06/2013]

Center for Heart and Lung Innovation, The University of British Columbia (Vancouver, Canada)

- Statistician [08/2006 — 01/2010]

## Publications (IF: impact factor)

1. **L Xing**, X Zhang, I Burstyn, P Gustafson (2020) On logistic Box-Cox regression for flexibly estimating the shape and strength of exposure-disease relationships. The Canadian Journal of Statistics. Accepted. 01 June 2020. (IF=0.588)
2. K Xu, X Zheng, D Pan, **L Xing**, X Zhang (2020) Stock Market Openness and Market Quality: Evidence from the Shanghai-Hong Kong Stock Connect Program. Journal of Financial Research. 07 April 2020. https://doi.org/10.1111/jfir.12210. (IF=1.086)

3. Y Xu, **L Xing**, J Su, X Zhang, W Qiu (2019) Bayesian hierarchical models for SNP discovery from genome-wide association studies, a pseudo-supervised machine learning approach. Sci Rep 9, 13686. doi:10.1038/s41598-019-50229-6. (IF=4.122)
4. **L Xing**, M Lesperance, X Zhang (2019) Simultaneously prediction of multiple outcomes using revised stacking algorithms. Bioinformatics. Jul 2; btz531, https://doi.org/10.1093/bioinformatics/btz531. (IF=4.513)
5. GW Rebok, JM Parisi, JS Barron, MC Carlson, I Diibor, KD Frick, LP Fried, TL Gruenewald, J Huang, S McGill, CM Ramsey, WA Romani, TE Seeman, E Tan, EK Tanner, **L Xing**, QL Xue (2019) Impact of Experience Corps® Participation on Children's Academic Achievement and School Behavior. Prev Sci. 20(4):478-487. doi:10.1007/s11121-018-0972-8. (IF=2.594)
6. BC McDonald, LA Flashman, DB Arciniegas DB, RJ Ferguson, **L Xing**, J Harezlak, GC Sprehn, FM Hammond, AC Maerlender, CL Kruck, KL Gillock, K Frey, RN Wall, AJ Saykin, TW McAllister (2017) Methylphenidate and Memory and Attention Adaptation Training for Persistent Cognitive Symptoms after Traumatic Brain Injury: A Randomized, Placebo-Controlled Trial, Neuropsychopharmacology. Aug;42(9):1766-1775. doi: 10.1038/npp.2016.261x. (IF=6.399)
7. ED Michos, KA Carson, ALC Schneider, PL Lutsey, **L Xing**, AR Sharrett, A Alonso, L Coker, M Gross, W Post, T Mosley, RF Gottesman (2014) Vitamin D and subclinical cerebrovascular disease: the Atherosclerosis Risk in Communities brain magnetic resonance imaging study. JAMA Neurology. Jul 1; 71(7): 863-871. (IF=7.420)
8. **L Xing**, I Burstyn, P Gustafson (2013) A comparison of Bayesian hierarchical modeling with group-based exposure assessment in modeling risks of disease in occupational epidemiological studies. Statistics in Medicine. Sep 20; 32(21): 3686-99. (IF=1.825)
9. CK Lyons, **L Xing**, JD Nelson (2010) Using LME in helicopter logging data, Society of American Foresters-Forest Science. 56(4): 356-365. (IF=1.812)
10. R Yuan, T Nagao, PD Pare, JC Hogg, DD Sin, MW Elliott, L Loy, **L Xing**, SE Kalloger, JC English, JR Mayo, HO Coxson (2010) Quantification of lung surface area using computed tomography. Respiratory Research. Oct 31; 11:153. (IF=3.093)
11. JV Gosselink, S Hayashi, WM Elliott, **L Xing**, B Chan, L Yang, C Wright, DD Sin, PD Pare, JA Pierce, RA Pierce, A Patterson, J Cooper, JC Hogg (2010) Differential expression of tissue repair genes in the pathogenesis of chronic obstructive pulmonary disease. American Journal of Respiratory and Critical Care Medicine. Jun 15; 181(12): 1329-35. (IF=12.996)
12. E Tamagawa, K Suda, Y Wei, **L Xing**, T Mui, Y Li, SF van Eeden, SF Man, DD Sin (2009) Endotoxin-induced translocation of interleukin-6 from lungs to the systemic circulation. Innate Immunity. 2009 Aug; 15(4): 251-8. (IF=3.271)
13. J Yee, MD Sadar, DD Sin, M Kuzyk, **L Xing**, J Kondra, A McWilliams, SF Man, S Lam (2009) Connective tissue-activating peptide III: a novel blood biomarker for early lung cancer detection. Journal of Clinical Oncology. Jun 10; 27(17): 2787-92. (IF=7.636)
14. WC Tan, C Lo, A Jong, **L Xing**, MJ Fitzgerald, WM Vollmer, SA Buist, DD Sin; Vancouver Burden of Obstructive Lung Disease (BOLD) Research Group (2009) Marijuana and chronic obstructive lung disease: a population-based study. Canadian Medical Association Journal, Apr 14; 180(8): 814-20. (IF=5.959)
15. SFP Man, **L Xing**, JE Connett, NR Anthonisen, RA Wise, DP Tashkin, X Zhang, R Vessey, TG Walker, BR Celli and DD Sin (2008) Circulating fibronectin to C-reactive protein ratio and mortality: a biomarker in COPD? European Respiratory Journal. 32:1451-1457. (IF=7.636)
16. E Tamagawa, N Bai, K Morimoto, C Gray, T Mui, K Yatera, X Zhang, **L Xing**, Y Li, I Laher, DD Sin, SFP Man, SF van Eeden (2008) Particulate matter exposure induces persistent lung inflammation and endothelial dysfunction. American Journal of Physiology - Lung Cellular and Molecular Physiology. 295: L79-L85. (IF=4.080)
17. H Coxson, B Quiney, DD Sin, **L Xing**, AM McWilliams, JR Mayo, S Lam (2008) Airway Thickness Assessed Using Computed Tomography and Optical Coherence Tomography. American Journal of Respiratory and Critical Care Medicine. Jun 1; 177(11): 1201-6. (IF=12.996)

# Technical Reports

18. (PhD Dissertation) **L Xing**, P Gustafson (2014) Model and Inference Issues Related to Exposure-Disease Relationships.
19. (M.Sc. project) **L Xing**, C Dean (2007) Hierarchical Segmented Regression Models with Application to Wood Density Analysis.

# Manuscripts

20. **L Xing**, X Zhang, A Van Den Hout, A Piccinin, G Muniz Terrera, S Hofer (2020) Optimal Study Design for Reducing Variances of Coefficient Estimators in Change-Point Models. (submitted to Biometrics) Available at https://arxiv.org/abs/2004.13963.
21. Y Lu, J Zhou, L Xing, X Zhang (2020) The Optimal Design of Clinical Trials with Potential Biomarker Effects, A Novel Computational Approach. (submitted to Statistics in Medicine) Available at https://arxiv.org/abs/2005.10494.
22. L Xing, S Joun, M Lesperance, K Mackey, X Zhang (2020) Handling highly correlated genes of Single-Cell RNA sequencing data in prediction models. Available at https://arxiv.org/abs/2007.02455.

# Grants and Awards

Mitacs Globalink 2021 (Submitted; support for top tier international undergraduates for summer research) 05/2020

Genome BC Sector Innovation Program (Submitted; $250,000; Role: Co-applicant) 05/2020

CIHR Grant *An investigation into the relationship between childhood asthma and mental health conditions* 03/2020
(Submitted; $400,000; Role: Co-applicant)

Mitacs Globalink 2020 (Awarded, but canceled due to COVID-19) [06/2020-08/2020]

Compute Canada the Resources for Research Groups 2020 competition [04/2020-03/2021]
(Awarded; equivalent dollar value $54,574; Role: Principal Investigator)

CIHR Grant *Childhood Obesity Management Using Innovative Digital Technology* [2020-2024]
(Awarded; $443,700; Role: Co-applicant)

University of Saskatchewan start-up grant (Awarded; $60,000; Role: Principal Investigator) [07/2019-06/2024]

NSERC PDF (Awarded; $45,000 per year) [2015 - 2016, 2017-2018]

NSERC PGS-D-3 (Awarded; $21,000 per year) [2009 - 2013]

Four Year Doctoral Fellowship, UBC, Accepted in title only [2009 - 2013]

# Teaching Appointment and Experience

Instructor — Mathematics and Statistics Department, The University of Saskatchewan
- Stat 345, Design and Analysis of Experiments (Scheduled) [09/2020-12/2020]
- Stat 498/846, Machine Learning (Scheduled) [09/2020-12/2020]
- Stat 443/851, Linear Statistical Models [01/2020-04/2020]

Guest Lecturer — Mathematics and Statistics Department, The University of Victoria
- Stat 454/563, Machine Learning [12/2018]
- Stat 458/568, Generalized Linear Model [02/2018 -03/2018]

Instructor — Biostatistics Department, Indiana University-Purdue University Indianapolis [01/2016-05/2016]
- PBHL-B 546, Applied Longitudinal Data Analysis (core course for graduate students)

Co-Instructor — Biostatistics Department, Indiana University-Purdue University Indianapolis [09/2015-11/2015]
- PBHL-B 646, Advanced Generalized Linear Models (core course for graduate students)

# Oral Presentations

Simultaneously prediction of multiple outcomes using revised stacking algorithms
- 28th Virtual Conference on Intelligent Systems for Molecular Biology (Poster) [07/2020]

About the Multi-Task Prediction Algorithms and the Optimal Design for Change Point Models
- Mathematics and Statistics Department, The University of Winnipeg [03/2019]
- Mathematics and Statistics Department, The University of Saskatchewan [04/2019]

Should We Use Square Root or Logarithm Transformation?

- New Researcher Conference 2018, Burnaby, Canada [07/2018]
- the Joint Statistical Meetings 2018, Vancouver Canada (Invited Poster) [07/2018]

A Two-Step Approach to Analyze Longitudinal Structural Neuroimaging Data

- the Joint Statistical Meetings, Chicago, USA [08/2016]

Development of Novel Methods for Modeling Exposure-Disease Relationship and Longitudinal Structural Brain Imaging Data [04/2016]

- US Food and Drug Administration (FDA), Silver Spring, MD, USA
- Johns Hopkins University, Baltimore, MD, USA

Model and Inference Issues Related to Exposure-Disease Relationships [04/2014]

- Statistics Department, The University of British Columbia, Canada

Analysis of School and Child Outcome in Experience Corps Study [09/2012]

- The Johns Hopkins Center on Aging and Health (COAH), USA

Bayesian Methods to Estimate Risks of Disease in Epidemiology /w Partly Missing Data [06/2010]

- The WNAR of the International Biometric Society, Seattle, USA

Hierarchical Segmented Regression Models with Application to a Wood Density Study [07/2008]

- Department of Medicine, The University of Alberta, Canada

# Professional Services

## Grant Review

- CIHR [05/2020]

## Paper Review

- Cancers (IF = 6.162) [04/2020]
- International Journal of Environmental Research and Public Health (IF = 2.468) [04/2020]
- IEEE Access (IF = 4.098) [03/2020]
- Applied Sciences (IF = 2.217) [02/2020-03/2020]

## Department and University Service

- Department Committee for Developing Standards for Tenure and Promotion [07/2019-08/2020]
- Computer Science / Mathematics and Statistics Joint Committee [05/2020-08/2020]
- Department Graduate Committee (Scheduled) [09/2020-12/2020]

## Other Memberships

- International Society for Computational Biology [05/2020]
- Respiratory Research Center, University of Saskatchewan [08/2019]
- Statistical Society of Canada [01/2019]
- International Chinese Statistical Association [07/2018]