Qiong Zhang *Updated*: December 2021

CONTACT INFORMATION

Department of Statistics
University of British Columbia
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Homepage: https://sarahqiong.github.io/

RESEARCH INTERESTS

Distributed Learning, Mixture Model, Optimal Transportation, Applications of Deep Learning

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA 09/2017 – present
Vancouver, British Columbia, Canada
Ph.D. (Statistics)
Supervisor: Professor Jiahua Chen
Cumulative GPA: 4.0/4.0

UNIVERSITY OF BRITISH COLUMBIA 09/2015 – 09/2017
Vancouver, British Columbia, Canada
M.Sc. (Statistics)
Supervisor: Professor Jiahua Chen
Thesis Title: Small Area Quantile Estimation under Unit-Level Models
Cumulative GPA: 4.0/4.0

UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA 09/2011 – 06/2015
Hefei, Anhui, China
B.Sc. (Statistics), School of the Gifted Young
Cumulative GPA: 3.66/4.3

PUBLICATIONS

PREPRINTS

- **Qiong Zhang** and Jiahua Chen. "Distributed Learning of Finite Gaussian Mixtures." Available at arXiv:2010.10412. Revised and resubmitted to Journal of Machine Learning Research.
- **Qiong Zhang**, Archer Gong Zhang, and Jiahua Chen. "Gaussian Mixture Reduction with Composite Transportation Divergence." Available at arXiv:2002.08410.

REFEREED PAPERS

- **Qiong Zhang** and Jiahua Chen. "Minimum Wasserstein Distance Estimator under Finite Location-scale Mixtures." Springer. In Press. Advances and Innovations in Statistics and Data Science. Editors: W. He, L. Wang, J. Chen and D. C. Lin.
- **Qiong Zhang** and Jihua Chen. "Robustness of Gaussian Mixture Reduction for Split-and-Conquer Learning of Finite Gaussian Mixtures." 3rd International Conference on Statistics: Theory and Applications (ICSTA), 2021.
- **Qiong Zhang***, Hanwen Liang*, Peng Dai, and Juwei Lu. "Boosting the Generalization Capability in Cross-Domain Few-shot Learning via Noise-enhanced Supervised Autoencoder." International Conference on Computer Vision (ICCV), 2021 (25.9% acceptance).
- **Qiong Zhang***, Xin Ding*, and William J Welch. "Classification Beats Regression: Counting of Cells from Greyscale Microscopic Images based on Annotation-free Training Samples." CAAI International Conference on Artificial Intelligence, 2021 (34.5% acceptance).
- Zhanshou Chen, Jiahua Chen, and **Qiong Zhang**. "Small Area Quantile Estimation via Spline Regression and Empirical Likelihood." Survey Methodology 45-1 45, no. 1 (2019): 81-99.

- Philippe Phan, Brandon Budhram, **Qiong Zhang**, Carly S. Rivers, Vanessa K. Noonan, Tova Plashkes, Eugene K. Wai et al. "Highlighting Discrepancies in Walking Prediction Accuracy for Patients with Traumatic Spinal Cord Injury: An Evaluation of Validated Prediction Models using A Canadian Multicenter Spinal Cord Injury Registry." The Spine Journal 19, no. 4 (2019): 703-710.
- **Qiong Zhang***, Bo Chang*, Shenyi Pan, and Lili Meng. "Generating Handwritten Chinese Characters using CycleGAN." In 2018 IEEE Winter Conference on Applications of Computer Vision (WACV), pp. 199-207. IEEE, 2018 (45.9% acceptance).

* Equal contribution.

Talks & Presentations

Poster Presentation

- 2021 Canadian Statistical Sciences Institute Showcase: Distributed Learning of Finite Gaussian Mixtures. 11/2021
- Statistical Society of Canada: Classification Beats Regression in Cell Counting from Microscopic Images. 06/2019
- Joint Statistical Meeting Data Expo: Do I Really Need A Jacket? 08/2018
- Winter Conference on Applications of Computer Vision: Generating Handwritten Chinese Characters using CycleGAN. 03/2018

Talks

- 2nd Waterloo Student Conference of Statistics, Actuarial Science and Finance: Distributed Learning of Finite Gaussian Mixtures. 11/2021
- Joint Statistical Meeting: Distributed Learning of Finite Gaussian Mixtures. 08/2021
- 3rd International Conference on Statistics: Theory and Applications: Robustness of Gaussian Mixture Reduction for Split-and-Conquer Learning of Finite Gaussian Mixtures. 07/2021
- UBC/SFU Joint Student Seminar: Distributed Learning of Finite Gaussian Mixtures.03/2021
- UBC/SFU Joint Student Seminar: Generating Handwritten Chinese Characters using CycleGAN. 03/2018
- Statistics Canada: Estimation of Small Area Means and Quantiles using EBLUP, Pseudo-EBLUP and M-quantile Approaches. 08/2016

Honors and Awards

- Honorable mentions for the presentation award of 2nd Waterloo Student Conference in Statistics, Actuarial Science and Finance 2021
- Winner of Statistical Society of Canada Annual Meeting Case Study 1 2019
- Margaret Wylie Memorial Scholarship in Statistics 2017
- International Doctoral Fellowship 2017 – 2021
- Faculty of Science Graduate Award 2017 – 2021
- CANSSI scholarship 2016
- UBC International Tuition Award 2015 – 2021
- USTC Outstanding Undergraduate Scholarship 2013/2014
- USTC Outstanding Freshman Scholarship 2011

Teaching Experience

Teaching Assistant, University of British Columbia

Held weekly labs and office hours, created and marked assignments and exams

- STAT 404: Design and Analysis of Experiments 09/2021 – 12/2021
- STAT 305: Introduction to Statistical Inference 07/2021 – 08/2021
- STAT 251: Elementary Statistics 05/2021 – 06/2021
- STAT 300: Intermediate Statistics for Applications 01/2021 – 04/2021
- STAT 344: Sample Surveys 09/2020 – 12/2020
- STAT 302: Introduction to Probability 09/2019 – 04/2020
- STAT 461/561: Statistical Theory II 01/2019 – 04/2019
- STAT 306: Finding Relationships in Data 09/2018 – 12/2018
- STAT 200: Elementary Statistics for Applications 09/2015 – 04/2018

Teaching Assistant, University of Science and Technology of China

Held weekly TA office hours, marked assignments and exams

- Linear Algebra (B1) 02/2015 – 06/2015
- Linear Algebra (B2) 09/2014 – 01/2015

Other

- Trainer for Teaching Assistant Program (UBC Statistics Department) 09/2019 – 09/2021
- Instructional Skills Workshops 11/2019

Professional Experience & Activities

Reviewer

- Journal of Machine Learning Research 2011 – present
- International Conference on Learning Representations (ICLR) 2021
- Neural Information Processing Systems (NeurIPS) 2019

Organizer & Conference Volunteer

- Constance van Eeden Lecture Organizer 2019 – 2020
- UBC/SFU Joint Student Seminar Organizer 2017 – 2019
- 2018 JSM-ICSA Volunteer 08/2018
- ICSA-Canada Chapter 2017 Symposium Volunteer 08/2017

Internship

Huawei Noah's Ark Lab, Markham, ON 05/2020 – 09/2020
Research Intern
Computer Vision Team
Supervisor: Dr. Juwei Lu
Project Title: Cross Domain Few Shot Learning

Rick Hansen Institute, Vancouver, BC 05/2017 – 08/2017
Research Intern
Supervisor: Dr. Nader Fallah
Project Title: Prediction for Prognosticating Independent Walking after Spinal Cord Injury

Statistics Canada, Ottawa, ON 06/2016 – 08/2016
Research Intern
International Cooperation and Corporate Statistical Methods Division
Supervisor: Dr. Yong You
Project Title: Estimation of Small Area Means and Quantiles using EBLUP, Pseudo-EBLUP and M-quantile Approaches

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Hardware and Software Skills

Programming: Proficient with R, Python; some experience with C, Matlab, SAS
Deep Learning API: Pytorch, Tensorflow
Office & Publishing: Microsoft Office, LaTeX