Qiong Zhang Updated: May 2022

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Github: www.github.com/SarahQiong/

Homepage: https://sarahqiong.github.io/

09/2017 - 05/2022

09/2015 - 09/2017

09/2011 - 06/2015

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

**EDUCATION** 

University of British Columbia Vancouver, British Columbia, Canada Ph.D. in Statistics. GPA: 4.0/4.0

Supervisor: Professor Jiahua Chen

University of British Columbia

Vancouver, British Columbia, Canada M.Sc. in Statistics. GPA: 4.0/4.0 Supervisor: Professor Jiahua Chen

Thesis: Small Area Quantile Estimation under Unit-Level Models

University of Science and Technology of China

Hefei, Anhui, China

B.Sc. in Statistics, School of the Gifted Young. GPA: 3.66/4.3

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#### Publications

#### PREPRINTS

 Qiong Zhang, Archer Gong Zhang, and Jiahua Chen. "Gaussian Mixture Reduction with Composite Transportation Divergence." Available at arXiv:2002.08410.

## Refereed Papers

- \* denotes equal author contribution (shared first-authorship).
- Qiong Zhang and Jiahua Chen. "Distributed Learning of Finite Gaussian Mixtures." Journal of Machine Learning Research 23 (99), 1–40, 2022.
- 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), 81–99, 2019.
- 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).

# TEACHING EXPERIENCE

Teaching Assistant, University of British Columbia Held weekly labs and office hours, created and marked assignments and exams

• STAT 201: Statistical Inference for Data Science	01/2022 - 04/2022
• 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

# Honors and Awards

• Honorable mentions for the presentation award of 2nd Waterloo Student Conference in Statis-		
tics, Actuarial Science and Finance	2021	
$\bullet$ 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	

# 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

# Professional Experience & Activities

#### Reviewer

• Journal of Machine Learning Research	2021 - present
• International Conference on Learning Representations (ICLR)	2021
• Neural Information Processing Systems (NeurlPS)	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 Computer Vision Team	05/2020 - 09/2020
• Rick Hansen Institute, Vancouver, BC	05/2017 - 08/2017
• Statistics Canada, Ottawa, ON	06/2016 - 08/2016
International Cooperation and Corporate Statistical Methods Division	

HARDWARE AND SOFTWARE SKILLS Programming: Proficient with R, Python; some experience with C, Matlab, SAS

Deep Learning API: Pytorch

Office & Publishing: Microsoft Office, LATEX