Qiong Zhang Updated: May 2022

CONTACT Information Department of Statistics University of British Columbia 3182 Earth Sciences Building

2207 Main Mall Vancouver, BC, Canada V6T 1Z4 E-mail: qiong.zhang@stat.ubc.ca

Tel: +1 (778) 681-2643

Github: www.github.com/SarahQiong/

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

09/2017 - 05/2022

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 09/2015 - 09/2017

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

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, Jérôme Paquet, Darren M. Roffey, Eve Tsai, and Nader

Fallah. "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(4), 703-710, 2019.

• 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 Co	onference 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