Qiong Zhang Updated: September 2022

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

Research Interests Distributed and Federated Learning, Mixture Model, Optimal Transportation, Deep Learning

EDUCATION AND ACADEMIC POSITIONS

RENMIN UNIVERSITY OF CHINA

09/2022 - present

Beijing, China

Assistant Professor

Beijing, China 100872

Institute of Statistics and Big Data

University of British Columbia, Vancouver, British Columbia, Canada

09/2017 - 05/2022

Ph.D. in Statistics. GPA: 4.0/4.0 Supervisor: Professor Jiahua Chen

Thesis: Inference under Finite Mixture Models : Distributed Learning and Approximate Inference

University of British Columbia Vancouver, British Columbia, Canada 09/2015 - 09/2017

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

09/2011 - 06/2015

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

COURSE INSTRUCTION, RENMIN UNIVERSITY OF CHINA

• SKX812: Advanced Statistical Computing

09/2022 - 12/2022

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 Cotics, Actuarial Science and Finance	onference in Statis- 2021	
TWAILDS	• 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 $2017 - 2021$	
	• CANSSI scholarship	2016	
	UBC International Tuition Award	2015 - 2021	
	USTC Outstanding Undergraduate Scholarship	2013/2014	
	USTC Outstanding Undergraduate Scholarship     USTC Outstanding Freshman Scholarship	2013/2014	
	• USTC Outstanding Freshman Scholarship	2011	
Talks & Presentations	Poster Presentation		
r resentations	• 2021 Canadian Statistical Sciences Institute Showcase: Distributed Learn sian Mixtures.	ing of Finite Gaus- 11/2021	
	• Statistical Society of Canada: Classification Beats Regression in Cell Conscopic Images.	unting from Micro- 06/2019	
	• Joint Statistical Meeting Data Expo: Do I Really Need A Jacket?	08/2018	
	• Winter Conference on Applications of Computer Vision: Generating Ha Characters using CycleGAN.	ndwritten Chinese 03/2018	
	Talks		
	• 2nd Waterloo Student Conference of Statistics, Actuarial Science and Fix Learning of Finite Gaussian Mixtures.	nance: Distributed 11/2021	
	• Joint Statistical Meeting: Distributed Learning of Finite Gaussian Mixtu	res. $08/2021$	
	• 3rd International Conference on Statistics: Theory and Applications: Robustness of Mixture Reduction for Split-and-Conquer Learning of Finite Gaussian Mixtures.		
	n Mixtures. $03/2021$		
	$\bullet$ UBC/SFU Joint Student Seminar: Generating Handwritten Chinese Ch cleGAN.	aracters using Cy- 03/2018	
	• Statistics Canada: Estimation of Small Area Means and Quantiles using EBLUP and M-quantile Approaches.	g EBLUP, Pseudo- 08/2016	
Professional	Reviewer		
Experience & Activities	• Journal of Machine Learning Research	2021 – present	
	• International Conference on Learning Representations (ICLR)	2021 – present	
	• Neural Information Processing Systems (NeurlPS)	2019 – present	
	Organizer & Conference Volunteer		

Constance van Eeden Lecture OrganizerUBC/SFU Joint Student Seminar Organizer

• ICSA-Canada Chapter 2017 Symposium Volunteer

 $\bullet~2018$  JSM-ICSA Volunteer

2019 - 2020

2017 - 201908/2018

08/2017

# Internship

Huawei Noah's Ark Lab, Markham, ON
 Computer Vision Team
 Rick Hansen Institute, Vancouver, BC
 Statistics Canada, Ottawa, ON
 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