Qiong Zhang

CONTACT INFORMATION	Institute of Statistics and Big Data Renmin University of China 708 Chongde South Building Beijing, China 100872	*E-mail:* qiong.zhang@ruc.edu.cn *Homepage:* https://sarahqiong.github.io/

RESEARCH INTERESTS

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

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EDUCATION AND ACADEMIC POSITIONS

RENMIN UNIVERSITY OF CHINA — 09/2022 – present
Beijing, China
Assistant Professor
Institute of Statistics and Big Data

UNIVERSITY OF BRITISH COLUMBIA — 09/2017 – 05/2022
Vancouver, British Columbia, Canada
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 — 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 — 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 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

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 − present
- Neural Information Processing Systems (NeurIPS)   2019 − present

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

Hardware and
Software Skills

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