Qiong Zhang Updated: February 2022

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Github: www.github.com/SarahQiong/

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

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

EDUCATION

University of British Columbia Vancouver, British Columbia, Canada

Ph.D. (Statistics)

Supervisor: Professor Jiahua Chen

Cumulative GPA: 4.0/4.0

University of British Columbia 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

Hefei, Anhui, China

B.Sc. (Statistics), School of the Gifted Young

Cumulative GPA: 3.66/4.3

09/2011 - 06/2015

09/2017 - present

09/2015 - 09/2017

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." Available at arXiv:2010.10412. Accepted at Journal of Machine Learning Research (JMLR) subject to minor revisions.
- 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).

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.

Honors and Awards

- Honorable mentions for the presentation award of 2nd Waterloo Student Conference in Statistics, Actuarial Science and Finance
- 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
- UBC International Tuition Award 2015 2021

2016

- 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 201: Statistical Inference for Data Science	01/2022 – present
• 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	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	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

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

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