Michael Minyi Zhang
Curriculum Vitae

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Academic Positions

2021–*current* **Assistant Professor**. Department of Statistics and Actuarial Science, University of Hong Kong.

2018–2020 **Post-doctoral Researcher**. Department of Computer Science, Princeton University.
Advisors: Barbara Engelhardt, Brandon Stewart.

Education

2018 **Ph.D. Statistics**. The University of Texas at Austin.
Advisor: Sinead Williamson.

2016 **M.S. Statistics**. The University of Texas at Austin.
Advisor: Sinead Williamson.

2013 **B.S. Statistics** (Honors); **B.A. Political Science** (Honors and Distinction in Major); **Minor in Russian**. University of California, Santa Barbara.
Advisor: Cynthia Kaplan.

Publications and Pre-prints

L.-F. Cheng, B. Dumitrascu, **M. M. Zhang**, C. Chivers, K. Li, and B. E. Engelhardt. Personalized effects of medication on patients using latent force models with Gaussian processes. *Artificial Intelligence and Statistics*, 108:4045–4055, 2020. arXiv:1906.00226.

A. Dubey, **M. M. Zhang**, E. P. Xing, and S. A. Williamson. Distributed, partially collapsed MCMC for Bayesian nonparametrics. *Artificial Intelligence and Statistics*, 108:3685–3695, 2020. arXiv:2001.05591. Joint first author.

G. W. Gundersen, **M. M. Zhang**, and B. E. Engelhardt. Latent variable modeling with random features. 2020. arxiv:2006.11145. Joint first author. In review.

L. Lin, B. Saparbayeva, **M. M. Zhang**, and D. B. Dunson. Accelerated algorithms for convex and non-convex optimization on manifolds. 2020. arxiv:2010.08908. In review.

S. A. Williamson, **M. M. Zhang**, and P. Damien. A new class of time dependent latent factor models with applications. *Journal of Machine Learning Research*, 21(27):1–24, 2020.

F. Pérez-Cruz, P. M. Olmos, **M. M. Zhang**, and H. Huang. Probabilistic time of arrival localization. *IEEE Signal Processing Letters*, 26(11):1683–1687, 2019. arXiv:1910.06569.

M. M. Zhang, B. Dumitrascu, S. A. Williamson, and B. E. Engelhardt. Sequential Gaussian processes for online learning of nonstationary functions. 2019. arxiv:1905.10003. In review.

M. M. Zhang and S. A. Williamson. Embarrassingly parallel inference for Gaussian processes. *Journal of Machine Learning Research*, 20(169):1–26, 2019.

M. M. Zhang, S. A. Williamson, and F. Pérez-Cruz. Accelerated parallel non-conjugate sampling for Bayesian non-parametric models. 2019. arXiv:1705.07178. In review, revise and resubmit. Appeared in "BNP@NeurIPS 2018" as workshop paper. Previously known as "Accelerated Inference for Latent Variable Models".

Z. I. Phillips, **M. M. Zhang**, and L. Reding. Social immune tolerance as a special protection of the queen. 2018. In review.

B. Saparbayeva, **M. M. Zhang**, and L. Lin. Communication efficient parallel algorithms for optimization on manifolds. *Advances in Neural Information Processing Systems 31*, pages 3578–3588, 2018. Accepted as poster.

M. M. Zhang, H. Lam, and L. Lin. Robust and parallel Bayesian model selection. *Computational Statistics and Data Analysis*, 127:229 – 247, 2018.

Z. I. Phillips, **M. M. Zhang**, and U. G. Müller. Dispersal of *Attaphila fungicola* (Blattodea: Ectobiidae), a symbiotic cockroach of leafcutter ants (Hymenoptera: Formicidae). *Insectes Sociaux*, 64(2):277–284, 2017.

M. M. Zhang, D. E. Schiavazzi, and L. Lin. Recombination of parallel Markov chains using local regression and Dirichlet process mixture models. 2017. Working paper.

M. M. Zhang, A. Dubey, and S. A. Williamson. Parallel Markov chain Monte Carlo for the Indian buffet process. 2015. "Bayesian Nonparametrics: The Next Generation" workshop paper.

Presentations and Posters

	Embarrassingly Parallel Inference for Gaussian Processes.
Jun. 2021	Contributed talk at 2021 ISBA World Meeting.
Jan. 2020	Contributed talk at 2020 Bayes Comp, ISBA.
Jul. 2019	Contributed talk at 2019 Joint Statistical Meetings.
Oct. 2017	Invited talk at the Department of Statistics and Data Sciences, The University of Texas at Austin.
Jun. 2017	Contributed talk at 11th Conference on Bayesian Nonparametrics, ISBA.
	Scalable Inference for Bayesian Non-parametrics.
Mar. 2020	Invited talk at the Department of Statistics, National Cheng Kung University.
Mar. 2020	Invited talk at the Institute of Statistical Science, Academica Sinica.
Feb. 2020	Invited talk at the Department of Industrial Engineering and Data Analytics, The Hong Kong University of Science and Technology.
	A New Class of Time-dependent Latent Factor Models with Applications.
Jun. 2019	Contributed talk at 12th Conference on Bayesian Nonparametrics, ISBA.
	Communication Efficient Parallel Algorithms for Optimization on Manifolds.
Dec. 2018	Poster at 32nd Conference on Neural Information Processing Systems.
	Parallel MCMC Recombination for Big Data Analysis.
Apr. 2018	Invited talk at the Department of Applied and Computational Mathematics and Statistics, Notre Dame University.
	Robust and Parallel Bayesian Model Selection.
Aug. 2016	Poster at Boston University/Keio University Workshop in Probability and Statistics.
	Parallel Markov Chain Monte Carlo for the Indian Buffet Process.
Dec. 2015	Contributed talk and poster at "Bayesian Nonparametrics: The Next Generation" workshop at NeurIPS.

Professional Positions

2016	**Summer Research Intern**. Wireless Research for the Internet of Things, Nokia Bell Labs. *Supervisors: Fernando Pérez-Cruz, Howard Huang.*
2013–14	**Analyst**. Rule14 LLC.

Teaching Experience

Spring 2021	**STAT4609: Big Data Analytics.** Department of Statistics and Actuarial Science, HKU.

Honors and Awards

2020	**Travel Award**. Bayes Comp 2020, ISBA.
2019	**Travel Award**. The 12th Conference on Bayesian Nonparametrics, ISBA.
2018	**Travel Award**. The 32nd Annual Conference on Neural Information Processing Systems.
2017	**Travel Award**. The 11th Conference on Bayesian Nonparametrics, ISBA.
2015	**Bonus Fellowship for Continuing Students**. The University of Texas at Austin.

Academic Service

2020	**Reviewer**. AISTATS, IEEE Transactions on Signal Processing, NeurIPS.
2019	**Reviewer**. AISTATS, ICML, JMLR, NeurIPS.
2018	**Reviewer**. Bayesian Non-Parametrics NeurIPS Workshop, ICML, NeurIPS, UAI.
2017	**Reviewer**. NeurIPS.
2016	**Reviewer**. Bayesian Non-Parametrics NeurIPS Workshop.

Personal Information and Skills

Technical	Python, Matlab, R.
Citizenship	United States.