

EDUCATION

- **Johns Hopkins University, Department of Computer Science** Baltimore, USA
Ph.D. student in Computer Science Aug. 2019 – Now
- **Peking University, School of Mathematical Sciences** Beijing, China
Master of Science in Applied Mathematics Sep. 2016 – July 2019
- **Peking University, School of Mathematical Sciences** Beijing, China
Bachelor of Science in Mathematics and Applied Mathematics Sep. 2012 – July 2016

RESEARCH EXPERIENCES

- **Johns Hopkins University** Baltimore, USA
Research Assistant Aug. 2019 - Now
 - **Obtaining regularization via iterate averaging:** We studied the regularization effect of performing iterate averaging. We showed that one can achieve adjustable ℓ_2 -type regularization for free by averaging the optimization path for many algorithms and objectives.
- **Baidu Big Data Lab** Beijing, China
Research Intern Dec. 2018 - May. 2019
 - **The multiplicative noise of SGD:** We re-interpreted the noise in stochastic gradient descent (SGD) from the perspective of mini-batch sampling. We showed that the noise distribution class is not important for its regularization effects.
- **Peking University** Beijing, China
Research Assistant July. 2017 - Dec. 2018
 - **The anisotropic noise of SGD:** We studied the importance of the anisotropic noise in stochastic gradient descent (SGD) and its benefits helping the dynamics escape from sharp minima. We demonstrated that the anisotropic noise of SGD was closely related to its good generalization performance.
 - **TNAR for semi-supervised learning:** We came up with a novel method for semi-supervised learning (SSL): tangent-normal adversarial regularization (TNAR). We in the first time applied adversarial training regime to realize manifold regularization for SSL. Experiments show that TNAR achieves state-of-the-art performance on SSL benchmarks.

PUBLICATIONS AND PREPRINTS

- **Jingfeng Wu**, Vladimir Braverman and Lin F. Yang. “Obtaining Adjustable Regularization for Free via Iterate Averaging.” International Conference on Machine Learning (ICML), 2020.
- **Jingfeng Wu**, Wenqing Hu, Haoyi Xiong, Jun Huan, Vladimir Braverman and Zhanxing Zhu. “On the Noisy Gradient Descent that Generalizes as SGD.” International Conference on Machine Learning (ICML), 2020.
- Bing Yu*, **Jingfeng Wu***, Zhanxing Zhu, and Jinwen Ma. “Tangent-Normal Adversarial Regularization for Semi-supervised Learning.” Conference on Computer Vision and Pattern Recognition (CVPR) 2019.
- Zhanxing Zhu*, **Jingfeng Wu***, Bing Yu, Lei Wu, and Jinwen Ma. “The Anisotropic Noise in Stochastic Gradient Descent: Its Behavior of Escaping from Minima and Regularization Effects.” International Conference on Machine Learning (ICML) 2019.

TEACHING EXPERIENCES

- TA, fall 2018, Peking University: Introduction to Data Science
- TA, fall 2017, Peking University: Advanced Algebra (I)
- TA, spring 2017, Peking University: Probability and Mathematical Statistics
- TA, fall 2016, Peking University: Geometry