

Honglin Yuan

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Curriculum Vitae

Education

- 2017 - present **Ph.D. Candidate** in ICME and StatsML Group, *Stanford University*. Advisor: Prof. Tengyu Ma *GPA: 4.22/4*
Research interest: Machine learning theory, in particular federated learning, deep learning, and optimization theory
- 2013 - 2017 **B.S.** in Applied Mathematics, *Peking University*, China *GPA Rank: 2/196*
- 2014 - 2017 **B.S. (Double Degree)** in Computer Science, *Peking University*, China

Publications

- **H. Y.**, Manzil Zaheer, Sashank Reddi, Federated Composite Optimization, *arXiv:2011.08474*
- **H. Y.**, Tengyu Ma, Federated Accelerated Stochastic Gradient Descent, *NeurIPS 2020, (Best Paper of ICML 2020 Workshop on Federated Learning)*
- **H. Y.***, Junzi Zhang*, Stephen Boyd, A Continuous-time Viewpoint of Quasi-Newton Methods, *working paper; an earlier version appeared on INFORMS Annual Meeting 2019 (*equal contribution)*
- **H. Y.**, Xiaoyi Gu, Rongjie Lai, Zaiwen Wen, Global Optimization with Orthogonality Constraints via Stochastic Diffusion on Manifold, *Journal of Scientific Computing, 2019*

Recent Talk

- Nov. 2020 INFORMS Annual Meeting 2020, Session on Federated Learning and Optimization, *Online*
- Jul. 2020 ICML 2020 Workshop on Federated Learning, *Online*
- Dec. 2019 Peking University BICMR Operations Research Seminar, *Beijing, China*
- Oct. 2019 INFORMS Annual Meeting 2019, Session on Efficient Learning and Optimization in Data Mining, *Seattle, WA*

Academic Honors and Awards

- 2020 - present TOTAL Innovation Scholarship, *TOTAL S.A.*
- 2020 Best Paper Award, *ICML 2020 Workshop on Federated Learning*
- 2019 - 2020 TOTAL Innovation Fellowship, *TOTAL S.A.*
- 2017 - 2019 Stanford School of Engineering Fellowship, *Stanford University*
- 2017 Excellent Graduate Award, *Peking University*
- 2016 National Scholarship (highest honored), *Peking University*
- 2016 Meritorious Winner in the Interdisciplinary Contest in Modeling (ICM)
- 2015 Meritorious Winner in the Mathematical Contest in Modeling (MCM)
- 2015 National Innovative Fund for Undergraduate Research (highest honored), *Peking University*
- 2015 Houston BAA Scholarship, *Peking University*
- 2014 Founder Scholarship, *Peking University*
- 2014 1st rank in the Artificial Intelligence Tournament, *EECS, Peking University*

Work Experience

- 2020 **Teaching Assistant**, *Machine Learning (CS 229), Stanford University*, Instructor: Tengyu Ma & Chris Re.
- 2020 **Research Intern**, *Google*, Host: Manzil Zaheer & Sashank J. Reddi.
- 2019, 2020 **Teaching Assistant (Head TA for 2020)**, *Optimization (CME 307), Stanford University*, Instructor: Yinyu Ye.
- 2014, 2015 **Teaching Assistant**, *Introduction to Computation (A), EECS, Peking University*, Instructor: Yafei Dai.

Skills

Proficient in: Python (TensorFlow, PyTorch), C, C++, MATLAB, \LaTeX , Wolfram Language

Experienced in: Assembly, Bash, CUDA, Lisp, Java, Julia, MPI, OpenMP, R, SQL, Web Programming