

Zhize Li (李志泽)



IIIS, Tsinghua University

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EDUCATION

Sep, 2014 - Now Ph.D. in Computer Science	Institute for Interdisciplinary Information Sciences (IIIS) Tsinghua University Advisor: Prof. Jian Li
Jan - Jun & Jul - Sep, 2018 Visiting Scholar	Department of Computer Science Duke University Host: Prof. Rong Ge
Jun - Jul, 2018 Visiting Scholar	H. Milton Stewart School of Industrial & Systems Engineering Georgia Institute of Technology Host: Prof. Guanghui (George) Lan
Aug, 2010 - Jul, 2014 B.E. in Computer Science	Department of Computer Science Xidian University GPA Ranking: 2/419 Thesis: "Design of Optimal Algorithm for Multi-Armed Bandits"

RESEARCH INTERESTS

- I am interested in optimization, theoretical computer science and machine learning.
- Algorithms for Convex/Nonconvex/Distributed Optimization and Machine Learning (Major)
 - Algorithm Design and Data Structures
 - Game Theory and Mechanism Design

EXPERIENCE/SERVICES

- (Sub-)Reviewer: ICML 2019, STOC 2019, JMLR 2018, COLT 2018, ICML 2017, AAAI 2017, IICALP 2016, TPDS 2016, TPAMI 2015, TON 2015.
- Sep, 2014 - Now Research Assistant (RA)
Tsinghua-MIT-CUHK Research Center for Theoretical Computer Science
- Feb, 2017 - Jun, 2017 Teaching Assistant (TA)
Advanced Theoretical Computer Science for graduate students
- Jul, 2016 - Aug, 2016 The 2016 National Combinatorial Optimization Summer School
Courses: Computational Complexity, Approximation Algorithms, Randomized Algorithms
Outstanding Student (top 10/110)
- Sep, 2015 - Dec, 2015 Teaching Assistant (TA)
Algorithm Design for undergraduate students (**Yao Class**)
- **Algorithm Engineer Intern**: **Alibaba** (Jul - Aug, 2013), **NetEase** (Jun - Aug, 2017)
- **Main Graduate Courses** that I have taken (sorted by year): Methods of Optimization, Algorithm Analysis and Design, Advanced Computational Economics, Modern Method for Optimal Calculation, Computational Complexity, Advanced Theoretical Computer Science.

PUBLICATIONS

1. Rong Ge, Rohith Kuditipudi, Zhize Li, Xiang Wang (**alphabetical order**). **Learning Two-layer Neural Networks with Symmetric Inputs**. In *7th International Conference on Learning Representations (ICLR 2019)*.
2. **Zhize Li**, Jian Li. **A Simple Proximal Stochastic Gradient Method for Nonsmooth Non-convex Optimization**. In *32nd Conference on Neural Information Processing Systems (NIPS 2018)*. **Spotlight**.
3. **Zhize Li**, Jian Li, Hongwei Huo. **Optimal In-Place Suffix Sorting**. In *25th International Symposium on String Processing and Information Retrieval (SPIRE 2018)*. **Invited**.

4. **Zhize Li**, Le Zhang, Zhixuan Fang, Jian Li. **Optimal Two-Stage Mechanism for Ordinal Peer Assessment**. In *11th International Symposium on Algorithmic Game Theory (SAGT 2018)*.
5. **Zhize Li**, Wei Zhang, Kees Roos. **A Fast Polynomial Primal-Dual Projection Algorithm for Linear Programming**. In *23rd International Symposium on Mathematical Programming (ISMP 2018)*. Full version in submission.
6. **Zhize Li**, Tianyi Zhang, Shuyu Cheng, Jun Zhu, Jian Li. **Stochastic Gradient Hamiltonian Monte Carlo with Variance Reduction for Bayesian Inference**. Submitted to (*Machine Learning* journal). under revision.
7. **Zhize Li**, Jian Li, Hongwei Huo. **Optimal In-Place Suffix Sorting**. Extended Abstract in *28th IEEE Data Compression Conference (DCC 2018)*.
8. Wei Cao, Jian Li, Yufei Tao, **Zhize Li**. **On Top-k Selection in Multi-Armed Bandits and Hidden Bipartite Graphs**. In *28th Conference on Neural Information Processing Systems (NIPS 2015)*.

MANUSCRIPTS/IN SUBMISSION

1. Rong Ge, Zhize Li, Weiyao Wang, Xiang Wang (alphabetical order). **Stabilized SVRG: Simple Variance Reduction for Nonconvex Optimization**. Submitted. 2019.
2. **Zhize Li**, Jian Li. **An Anderson-Chebyshev Mixing Method for Nonlinear Optimization**. Submitted. 2018.
3. Yu Shi, Jian Li, **Zhize Li**. **Gradient Boosting With Piece-Wise Linear Regression Trees**. [arXiv]. 2018.

INVITED TALKS/POSTERS

1. [China Theory Week 2018](#) (founded by [Prof. Andrew Chi-Chih Yao](#) in 2007). [slides]
2. The 16th [China Symposium on Machine Learning and Applications](#) (MLA'18). [slides]. [poster]

CONFERENCE TALKS/POSTERS

NeurIPS 2018, SPIRE 2018, SAGT 2018, ISMP 2018, DCC 2018, NIPS 2015.

SELECTED AWARDS

- National Scholarship (top 1%)
- Pacesetter of Outstanding Graduates (highest)
- The First Prize in Collegiate Advanced Mathematics Contest (highest) top 13/15000

REFERENCES

- **Prof. Jian Li**
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- **Prof. Rong Ge**
Assistant Professor
Department of Computer Science, Duke University
Email: rongge@cs.duke.edu
Homepage: <https://users.cs.duke.edu/~rongge/>
- **Prof. Guanghui (George) Lan**
A. Russell Chandler III Early Career Professor and Associate Professor
H. Milton Stewart School of Industrial & Systems Engineering, Georgia Institute of Technology
Email: george.lan@isye.gatech.edu
Homepage: <https://www.isye.gatech.edu/users/george-lan>
- **Prof. Longbo Huang**
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