

# 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) <b>Tsinghua University</b> Advisor: <a href="#">Prof. Jian Li</a>
Jan - Jun & Jul - Sep, 2018 Visiting Scholar	Department of Computer Science <b>Duke University</b> Host: <a href="#">Prof. Rong Ge</a>
Jun - Jul, 2018 Visiting Scholar	H. Milton Stewart School of Industrial & Systems Engineering <b>Georgia Institute of Technology</b> Host: <a href="#">Prof. Guanghui (George) Lan</a>
Aug, 2010 - Jul, 2014 B.E. in Computer Science	Department of Computer Science <b>Xidian University</b> 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

- **Reviewer:** TPAMI 2019, NeurIPS 2019, ECML 2019, COLT 2019, ICML 2019, STOC 2019, JMLR 2018, COLT 2018, ICML 2017, AAAI 2017,ICALP 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)

## PUBLICATIONS

1. Rong Ge, Zhize Li, Weiyao Wang, Xiang Wang (alphabetical order). **Stabilized SVRG: Simple Variance Reduction for Nonconvex Optimization**. In *32nd Annual Conference on Learning Theory (COLT 2019)*.
2. 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)*.
3. **Zhize Li**, Jian Li. **A Simple Proximal Stochastic Gradient Method for Nonsmooth Nonconvex Optimization**. In *32nd Conference on Neural Information Processing Systems (NIPS 2018)*. **Spotlight**.
4. **Zhize Li**, Jian Li, Hongwei Huo. **Optimal In-Place Suffix Sorting**. In *25th International Symposium on String Processing and Information Retrieval (SPIRE 2018)*. **Invited**.

5. **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)*.
6. **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.
7. **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.
8. **Zhize Li**, Jian Li, Hongwei Huo. **Optimal In-Place Suffix Sorting**. Extended Abstract in *28th IEEE Data Compression Conference (DCC 2018)*.
9. 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

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1. **Zhize Li**. **SSRGD: Simple Stochastic Recursive Gradient Descent for Escaping Saddle Points**. Manuscript. 2019.
2. **Zhize Li**, Jian Li. **A Fast Anderson-Chebyshev Mixing Method for Nonlinear Optimization**. Submitted. 2019.
3. Yu Shi, Jian Li, **Zhize Li**. **Gradient Boosting With Piece-Wise Linear Regression Trees**. Submitted. 2019.

## INVITED TALKS/POSTERS

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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

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

## SELECTED AWARDS

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

## REFERENCES

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- **Prof. Rong Ge**  
Assistant Professor  
Department of Computer Science, Duke University  
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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 Tech  
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- **Prof. Longbo Huang**  
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