

Jiawei Zhang | Curriculum Vitae

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EDUCATION

The Chinese University of Hong Kong, Shenzhen

Ph.D. in Computer and Information Engineering

Shenzhen, China

2021

University of Science and Technology of China

B.Sc. in Mathematics (Hua Loo-Keng talent program)

Hefei, China

2016

PROFESSIONAL EXPERIENCE

Massachusetts Institute of Technology

Laboratory for Information & Decision Systems (LIDS)

Postdoctoral Associate (working with Prof. Asuman Ozdaglar)

Cambridge, MA

2021 - present

The Chinese University of Hong Kong, Shenzhen

Graduate Research & Teaching Assistant (Advisor: Prof. Zhi-Quan (Tom) Luo)

Shenzhen, China

2016 - 2021

RESEARCH INTEREST

I am a postdoctoral associate in Laboratory for Information & Decision Systems (LIDS) at MIT working with Prof. Asuman Ozdaglar. I attained my Ph.D degree from the Chinese University of Hong Kong (Shenzhen) supervised by Prof. Zhi-Quan (Tom) Luo. Previously, I attained B.Sc in Mathematics (Hua Loo-Keng talent program) from University of Science and technology of China.

My research interest focuses on designing computationally and statistically efficient, scalable, and robust optimization and machine learning algorithms, finding solutions to decision-making, for engineering and social science problems in the big-data regime.

SELECTED PUBLICATIONS

Preprints

1. **Jiawei Zhang**, Wenqiang Pu, and Zhi-quan Luo, *On the Iteration Complexity of Smoothed Proximal ALM for Non-convex Optimization Problem with Convex Constraints*, arXiv preprint arXiv:2207.06304, 2022.

Journal Papers

1. **Jiawei Zhang**, Songyang Ge, Tsunghui Chang, and Zhi-Quan Luo, *Decentralized Non-Convex Learning with Linearly Coupled Constraints*, *IEEE Transactions on Signal Processing*, vol. 70, pp. 3312-3327, June 2022.
2. **Jiawei Zhang** and Zhi-Quan Luo, *A Global Dual Error Bound and Its Application to the Analysis of Linearly Constrained Nonconvex Optimization*, *SIAM Journal on Optimization*, vol. 32, no. 3, pp. 2319-2346, 2022.
3. Zhiguo Wang, **Jiawei Zhang**, Tsung-Hui Chang, Jian Li, and Zhi-Quan Luo, *Distributed stochastic consensus optimization with momentum for nonconvex nonsmooth problems*, *IEEE Transactions on Signal Processing*, vol. 69, pp. 4486–4501, Jul. 2021.
4. **Jiawei Zhang** and Zhi-Quan Luo, *A Proximal Alternating Direction Method of Multiplier for Linearly Constrained Nonconvex Minimization*, *SIAM Journal on Optimization*, vol. 30, no.3, pp. 2272-2302, 2020.

Conference Papers

1. Asuman Ozdaglar, Sarath Pattathil, **Jiawei Zhang** (corresponding author), and Kaiqing Zhang, *Revisiting the Linear-Programming Framework for Offline RL with General Function Approximation*, *ICML 2023*. (Authors listed in alphabetical order)
2. Asuman Ozdaglar, Sarath Pattathil, **Jiawei Zhang** (corresponding author), and Kaiqing Zhang, *What is a Good Metric to Study Generalization of Minimax Learners?* *NeurIPS 2022*. (Authors listed in alphabetical order)
3. **Jiawei Zhang**, Yushun Zhang, Mingyi Hong, Ruoyu Sun, and Zhi-Quan Luo, *When Expressivity Meets Trainability: Fewer than n Neurons Can Work*, *NeurIPS 2021*.

4. Congliang Chen, **Jiawei Zhang**, Li Shen, Peilin Zhao, and Zhi-Quan Luo, *Communication Efficient Primal-Dual Algorithm for Nonconvex Nonsmooth Distributed Optimization*, AISTATS 2021.
5. **Jiawei Zhang**, Peijun Xiao, Ruoyu Sun, and Zhi-Quan Luo, *A Single-loop Smoothed Gradient Descent-ascent Algorithm for Nonconvex-concave Min-max Problems*, NeurIPS 2020.
6. **Jiawei Zhang**, Songyang Ge, Tsunghui Chang, and Zhi-Quan Luo, *A Proximal Dual Consensus Method for Linearly Coupled Multi-Agent Non-Convex Optimization*, IEEE ICASSP 2020.
7. Yue Xu, Feng Yin, **Jiawei Zhang**, Wenjun Xu, Shuguang Cui, and Zhi-Quan Luo, *Scalable Gaussian process using inexact ADMM for big data*, IEEE ICASSP 2019.
8. Wenye Li, **Jiawei Zhang**, Jianjun Zhou, and Laizhong Cui, *Learning Word Vectors with Linear Constraints: A Matrix Factorization Approach*, IJCAI 2018.

AWARDS

1. **PhD Fellowship** granted by Shenzhen Research Institute of Big Data.
2. **Presidential Award for Outstanding Doctoral Students** granted by The Chinese University of Hong Kong, Shenzhen.
3. **2023 POSTDOCTORAL FELLOWSHIP FOR ENGINEERING EXCELLENCE** at MIT.