LING ZHANG

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EDUCATION

University of Washington **Seattle, WA, USA**
Ph.D. in Electrical & Computer Engineering Sep. 2018 – Jun. 2024
Advisor: Prof. Baosen Zhang

Zhejiang University **Hangzhou, China**
M.S. in Information & Communication Engineering Sep. 2015 – Mar. 2018

Ocean University of China **Qingdao, China**
B.E. in Electronic & Information Engineering Sep. 2011 – Jun. 2015

RESEARCH INTERESTS

Learning-to-optimize with guaranteed constraint satisfaction, with primary application to power system operation under uncertainty; LLM-driven heuristic design for combinatorial optimization; training and data curation strategies for LLM alignment.

PROFESSIONAL EXPERIENCE

Microsoft Research Asia **Beijing, China**
Senior Researcher Jun. 2024 – Present
Machine Learning & Industry Innovation Group (Manager: Dr. Jiang Bian)

Argonne National Laboratory **Lemont, IL, USA**
Research Aide Technical Intern Oct. 2021 – Dec. 2021
Electricity Market Team (Manager: Dr. Todd Levin)

PUBLICATIONS

Journal Papers

[1] Y., Chen, **L. Zhang**, and B. Zhang, "Learning to Solve DCOPF: A Duality Approach," *Electric Power Systems Research*, 2022.

[2] **L. Zhang**, Y. Chen, and B. Zhang, "A Convex Neural Network Solver for DCOPF with Generalization Guarantees," *IEEE Transactions on Control of Networked Systems*, 2021.

[3] **L. Zhang**, and B. Zhang, "Scenario Forecasting of Residential Load Profiles," *IEEE Journal on Selected Areas in Communications, Special Issue on Communications and Data Analytics in Smart Grid*, 2020.

[4] **L. Zhang**, Y. Cai, Q. Shi, G. Yu, and G. Y. Li, "Cost-Efficient Cellular Networks Powered by Micro-grids," *IEEE Transactions on Wireless Communication*, 2017.

Conference Papers

[5] **L. Zhang**, X. Yang, J. Yu, P. Cheonyoung, M. Lee, L. Song, and J. Bian, "Holdout-Loss-Based Data Selection for LLM Finetuning via In-Context Learning ," *To appear in International Conference on Learning Representations (ICLR)*, 2026.

[6] H. Qian, X. Yang, L, Zhang, L. Song, J. Bian, and C. Yuan, "NaDRO: Leveraging Dual-Reward Strategies for LLMs Training on Noisy Data ," in *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*, 2025.

[7] **L. Zhang**, and B. Zhang, "Learning to Solve the AC Optimal Power Flow via A Lagrangian Approach," *2022 North American Power Symposium (NAPS)*, 2022.

[8] **L. Zhang**, and B. Zhang, "An Iterative Approach to Improving Solution Quality for AC Optimal Power Flow Problems," *e-Energy '22: Proceedings of the Thirteenth ACM International Conference on Future Energy Systems*, 2022. **(Best Paper Finalist)**

[9] Y. Chen, Y. Tan, **L. Zhang** and Baosen Zhang, "Vulnerabilities of Power System Operations to Load Forecasting Data Injection Attacks," *2021 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm)*, 2021.

Preprints

[10] X. Yang, **L. Zhang**, H. Qian, L. Song, and J. Bian, "HeurAgenix: Leveraging LLMs for Solving Complex Combinatorial Optimization Challenges," *arXiv preprint: 2506.15196*.

[11] **L. Zhang**, D. Tabas, and B. Zhang, "Convex Restriction of Feasible Sets for AC Radial Networks," *arXiv preprint: 2310.00549*.

[12] **L. Zhang**, D. Tabas, and B. Zhang, "An Efficient Learning-based Solver for Two-stage DC Optimal Power Flow with Feasibility Guarantees," *arXiv preprint: 2304.01409*.

TALKS & PRESENTATIONS

Invited Talks

[1] "An Iterative Approach to Improving Solution Quality for AC Optimal Power Flow Problems," *INFORMS Annual Meeting*, Anaheim, California, 2021/10.

[2] "Scenario Forecasting of Residential Load Profiles," *INFORMS Annual Meeting*, online, 2020/10.

Oral Presentations

[3] "An Iterative Approach to Improving Solution Quality for AC Optimal Power Flow Problems," *INFORMS Annual Meeting*, Phoenix, Arizona, 2023/10.

[4] "An Efficient Learning-based Solver for Two-stage DC Optimal Power Flow with Feasibility Guarantees," *the 6th Workshop on Autonomous Energy Systems at National Renewable Energy Laboratory*, Golden, Colorado, 2023/09.

[5] "Learning to Solve the AC Optimal Power Flow via A Lagrangian Approach," *2022 North American Power Symposium*, University of Utah, Utah, 2022/10.

[6] "An Iterative Approach to Improving Solution Quality for AC Optimal Power Flow Problems," *ACM e-Energy 2022*, online, 2022/06.

[7] "An Iterative Approach to Improving Solution Quality for AC Optimal Power Flow Problems," *Tackling Climate Change with Machine Learning workshop at ICML 2021*, online, 2021/07.

Poster Presentations

[8] "An Efficient Learning-based Solver for Two-stage DC Optimal Power Flow with Feasibility Guarantees," *IEEE PES General Meeting*, Orlando, Florida, 2023/07.

[9] "An Efficient Learning-based Solver for Two-stage DC Optimal Power Flow with Feasibility Guarantees," *Grid Science Winter School and Conference*, Los Alamos National Laboratory, New Mexico, 2023/01.

TEACHING EXPERIENCE

Department of Electrical & Computer Engineering   **University of Washington**
Teaching Assistant   *Course: EE 242 - Signals, Systems and Data*   *Spring 2023*

· Led instructional sessions to provide step-by-step problem-solving guidance to students, organized practice problems and solutions, and held office hours to address students' questions.

Department of Information & Communication Engineering   **Zhejiang University**
Teaching Assistant   *Course: ISEE 11120170 - Signal Processing*   *Spring 2017*

· Led instructional sessions, graded assignments and exams and provided constructive feedback to students, and held office hours to address students' questions.

HONORS & AWARDS

2023/01	Travel Grant for the 2023 Grid Science Winter School, Los Alamos National Lab
2022/06	Best Paper Finalist, ACM e-Energy '22
2019/09	Clean Energy Institute (CEI) Fellowship, University of Washington
2018/04	College of Engineering Recruitment Fellowship, University of Washington
2018/03	Excellent Postgraduate Students' Award, Department of Education of Zhejiang Province
2018/03	National Scholarship, Chinese Ministry of Education (top 3%)