

YUFAN ZHANG

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PROFESSIONAL EMPLOYMENT

University of California San Diego

2023 - present

Postdoctoral Researcher

Department of Electrical and Computer Engineering

EDUCATION

Shanghai Jiao Tong University

2017 - 2022

Ph.D. in Electrical Engineering

Chongqing University

2013 - 2017

Bachelor in Electrical Engineering

RESEARCH INTERESTS

Demand Response

Machine Learning Applications in Power Systems

Decision Making under Uncertainty

PUBLICATIONS

Preprints

3. **Y. Zhang**, H. Wen, and Q. Wu, "A contextual bandit approach for value-oriented prediction interval forecasting," arXiv preprint arXiv:2210.04152, 2022.
2. **Y. Zhang**, H. Wen, T. Feng, and Y. Chen, "Targeted demand response: Formulation, Implications, and fast algorithms," arXiv preprint arXiv:2211.14806, 2022.
1. X. He, H. Wen, **Y. Zhang**, and Y. Chen, "Enabling fast unit commitment constraint screening via learning cost model," arXiv preprint arXiv:2212.00483, 2022.

Journal Papers

11. **Y. Zhang**, Q. Wu, Q. Ai and J. P. S. Catalão, "Closed-Loop aggregated baseline load estimation using contextual bandit with policy gradient," in IEEE Transactions on Smart Grid, vol. 13, no. 1, pp. 243-254, 2022.
10. **Y. Zhang**, H. Wen, Q. Wu and Q. Ai, "Optimal adaptive prediction intervals for electricity load forecasting in distribution systems via reinforcement learning," IEEE Transactions on Smart Grid.
9. **Y. Zhang**, Q. Ai, F. Xiao, R. Hao, and T. Lu, "Typical wind power scenario generation for multiple wind farms using conditional improved wasserstein generative adversarial network," International Journal of Electrical Power & Energy Systems, vol. 114, p. 105388, 2020.
8. **Y. Zhang**, Q. Ai, H. Wang, Z. Li, and X. Zhou, "Energy theft detection in an edge data center using threshold-based abnormality detector," International Journal of Electrical Power & Energy Systems, vol. 121, p. 106162, 2020.
7. **Y. Zhang**, Q. Ai, H. Wang, Z. Li, and K. Huang, "Bi-level distributed day-ahead schedule for islanded multi-microgrids in a carbon trading market," Electric Power Systems Research, vol. 186, p. 106412, 2020.
6. **Y. Zhang**, Q. Ai, and Z. Li, "Grouping of dynamic electricity consumption behaviour: An f-divergence based hierarchical clustering model," IET Generation, Transmission & Distribution, vol. 15, no. 22, pp. 3164-3175, 2021.
5. **Y. Zhang**, Q. Ai, and Z. Li, "Admm-based distributed response quantity estimation: a probabilistic perspective," IET Generation, Transmission & Distribution, vol. 14, no. 26, pp. 6594-6602, 2020.
4. **Y. Zhang**, Q. Ai, and Z. Li, "Intelligent demand response resource trading using deep reinforcement learning," CSEE Journal of Power and Energy Systems, 2021.
3. **Y. Zhang**, Q. Ai, Z. Li, S. Yin, K. Huang, M. Yousif, and T. Lu, "Data augmentation strategy for small sample short-term load forecasting of distribution transformer," International Transactions on Electrical Energy Systems, vol. 30, no. 7, p. e12209, 2020.
2. **Y. Zhang**, Q. Ai, and Z. Li, "Improving aggregated baseline load estimation by gaussian mixture model," Energy Reports, vol. 6, pp. 1221-1225, 2020.

1. S. Yin, Q. Ai, Z. Li, **Y. Zhang**, and T. Lu, "Energy management for aggregate prosumers in a virtual power plant: A robust stackelberg game approach," International Journal of Electrical Power & Energy Systems, vol. 117, p. 105605, 2020.

Conferences Papers

1. **Y. Zhang**, Yuquan Liu, Zhiwen Yu, Wen Xiong, Li Wang, Qian Ai, Zhaoyu Li, Kaiyi Huang, Ran Hao, and Ziqing Jiang, "Improving Aggregated Load Forecasting Using Evidence Accumulation k-Shape Clustering," 2020 IEEE Power & Energy Society General Meeting (PESGM), Montreal, QC, Canada, 2020.

HONORS & AWARDS

Frontrunner 5000 Paper , China Association for Science and Technology	2022
SJTU Outstanding PHD Graduate , Shanghai Jiao Tong University	2022
Outstanding Doctoral Graduate Development Scholarship , Shanghai Jiao Tong University	2022
Outstanding PHD Student Scholarship , Shanghai Jiao Tong University	2020
Best Conference Paper of IEEE Power & Energy Society General Meeting , PESGM	2020
Sieyuan Electrics Co. Scholarship , Shanghai Jiao Tong University	2019
Outstanding Undergraduate of Chongqing University , Chongqing University	2017
Undergraduate National Scholarship , Chinese Ministry of Education	2016
China Yangtze Power Co. Scholarship , China Yangtze Power Co.	2014
Freshmen Scholarship of Chongqing University , Chongqing University	2013
Excellent Student Scholarship of Chongqing University (Top 10%) , Chongqing University	2013 - 2016

PROFESSIONAL SERVICES

Journal Reviewers: IEEE Transactions on Industrial Informatics, IET Renewable Power Generation, Acta Automatica Sinica, International journal of energy research, Applied Energy, Energy Reports.