

KEDI ZHENG

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Room 3-208, West Academic Building, Tsinghua University, Beijing, China, 100084

EDUCATION

Ph.D., Electrical Engineering

August 2017 - June 2022 (Expected)

Department of Electrical Engineering, Tsinghua University, China

Advisor: Dr. Qixin Chen

B.E., Electrical Engineering (GPA 91/100, Ranking 10/142)

August 2013 - June 2017

Department of Electrical Engineering, Tsinghua University, China

B.S., Economics (Secondary Degree)

September 2014 - June 2017

School of Economics and Management, Tsinghua University, China

RESEARCH INTERESTS AND SKILLS

Interests	Locational Marginal Price (LMP) Theory; Application of machine learning in power systems; Electricity Forecasting.
Skills	Softwares: R, Python, MATLAB, Yalmip, TeX, Git. Techniques: Power Systems Data Analytics, Modeling, and Optimization.

RESEARCH PUBLICATIONS

Journal Papers

- J1 Cheng Feng, Yi Wang, **Kedi Zheng**, and Qixin Chen, “Smart Meter Data-Driven Customizing Price Design for Retailers”, *IEEE Transactions on Smart Grid*, accepted, 2019.
- J2 **Kedi Zheng**, Qixin Chen, Yi Wang, Chongqing Kang, and Qing Xia, “A Novel Combined Data-Driven Approach for Electricity Theft Detection”, *IEEE Transactions on Industrial Informatics*, 2019, 15(3):1809-1819.
- J3 Qixin Chen, **Kedi Zheng**, Chongqing Kang, and Qing Xia, “Detection Methods of Abnormal Electricity Consumption Behaviors: Review and Prospects”, *Automation of Electric Power Systems*, 2018, 42(17):189-199 (in Chinese).

Conference Papers

- C1 **Kedi Zheng**, Yi Wang, Qixin Chen, and Dan Lu, “Multi-Objective Power Network Partition: Finding the Pareto Frontier”, *IEEE Power & Energy Society General Meeting*, August, 2019.
- C2 **Kedi Zheng**, Yi Wang, Qixin Chen, and Haiwang Zhong, “Multidimensional Smart Meter Data Analytics based on Sparse Representation Technique”, *Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER)*, November 2018.
- C3 **Kedi Zheng**, Yi Wang, Qixin Chen, and Yuanpeng Li, “Electricity Theft Detecting Based on Density-Clustering Method”, *IEEE Innovative Smart Grid Technologies - Asia (ISGT-Asia)*, December, 2017.

Manuscript

- M1 **Kedi Zheng**, Qixin Chen, Yi Wang, Chongqing Kang, and Le Xie, “Unsupervised LMP Pattern Region Identification”, submitted to *IEEE Transactions on Smart Grid*.
- M2 Yuxuan Gu, **Kedi Zheng**, Qixin Chen, and Yi Wang, “An Online Approach for Partial Topology Recovery in LMP Markets”, submitted to *IEEE Transactions on Power Systems*.
- M3 **Kedi Zheng**, Yi Wang, Kai Liu, and Qixin Chen, “Locational Marginal Price Forecastin: A Componential and Ensemble Approach”, submitted to *IEEE Transactions on Smart Grid*.

M4 **Kedi Zheng**, Qixin Chen, Yi Wang, and Bojian Wen, “Impact of Electricity Price Forecasting Errors on Bidding: A Price-Taker’s Perspective”, submitted to ***Electric Power System Research***, Special Issue on Power Systems Computation Conference (PSCC).

M5 Dawei Wang, **Kedi Zheng**, Qixin Chen, Xuan Zhang, and Gang Luo, “A Data-Driven Probabilistic Power Flow Method Based on Convolutional Neural Networks”, submitted to ***International Transactions on Electrical Energy Systems***.

AWARDS

Guanghua Educational Foundation Scholarship for Academic Excellence,	
Awarded by Tsinghua University	October 2018
Outstanding Graduate Award (top 5%),	
Awarded by City of Beijing	June 2017
Excellent Graduate Award (top 10%),	
Awarded by Tsinghua University	June 2017
Evergrande Group Scholarship for Academic Excellence,	
Awarded by Tsinghua University	October 2016
ZHENG Ge Ru Foundation Scholarship for Academic Excellence,	
Awarded by Tsinghua University	October 2015
China National Petroleum Corporation (CNPC) Scholarship for Academic Excellence,	
Awarded by Tsinghua University	October 2014

MISCELLANEOUS

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- IEEE Student Member, IET Student Member
 - Native speaker of Mandarin Chinese. Fluent speaker of English.
 - Student Tutor for Undergraduate Class 2017 in the Department of Electrical Engineering.
 - Reviewer for of IEEE Transactions on Power Systems, IET Generation Transmission & Distribution, IET Smart Grid, CSEE Journal of Power and Energy Systems, International Transactions on Electrical Energy Systems, 2019 IEEE PES General Meeting