

XIN LI

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👤 Feb, 1997

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🔗 dichter97.github.io/AcademicPage/

🏛 North China Electric Power University

📍 No.2 Beinong Road, Changping Distric, Beijing

💻 Skills: Matlab;Python;C++;Scikit-learn;Keras; Opencv;Git;Pyomo.

💻 Software: Latex, Origin, Excel, Visio, Zotero, Visual Studio, Sourcetree.

🗣 Languages: English(Fluent), German&French(Elementary)



EDUCATION

North China Electric Power University

Master of Engineering in Control Science and Engineering

GPA: 3.59/4.00, Average score: 85.9/100

Sept, 2019 - June, 2022

Beijing, China

North China Electric Power University

Bachelor of Engineering in Automation

GPA: 3.51/4.00, Average score: 85.1/100

Sept, 2015 - June, 2019

Beijing, China

RESEARCH EXPERIENCE

Reserach Assistance

2020.01-2021.01

North China Electric Power University

- **Project** Research on key technologies for the operation of integrated energy systems containing multiple energy supplies and outputs.—Project for State Grid Shandong Electric Power Company
- **Project** Technique system evaluation for construction of State Grid's Lanzhou national new area energy innovation park—Project for State Grid Gansu Electric Power Company
- **Project** Flame image based combustion feature detection and combustion stability research for thermal plants

Research Intern.

2021.01-2021.12

Jibei Electric Power Research Institute

- **Project** Study on the development pathway for future power system with high RES penetration considering source-grid-load coordination based on China's carbon neutral policy.
- **Project** Research on interaction response techniques for large-scale flexible resource on demand side with high penetration of renewable energy
- **Project** Research on the deployment and integrating strategies for the large-scale renewable energy hubs

Master Thesis

- **Name** Game-theoretic scheduling in integrated energy system considering energy flexibility from consumers

- **My Work** Focus on how local residents can benefit from the distributed energy system operation optimization at the community level. 1) Analysing the behavior and energy flexibility of different types of consumers(residential, commercial, and industrial) based on satisfaction modelling. 2)Machine learning and data-driven methods to process numerous scenarios for energy aggregators considering uncertainty. 3)Optimizing the operation and demand response of the distributed energy system based on game theory.

INDUSTRY EXPERIENCE

Research Engineer

2022.09-2023.05

TsIntergy Technology &

Energy Planning & Operation Center of Tsinghua University

- **Main Job**

Electricity spot market clearing algorithm

Virtual power plant optimization and trade modelling

- **Projects**

Bidding Optimization for Virtual Power Plant Considering Storage Degradation based on CVaR

Optimization of Building Cooling System Operation and Demand Response Portfolio

Maintenance and Algorithm Development of Spot Electricity Market Clearing System

Algorithm Design for Load Flexibility's Participation in Electricity Market

A managed electricity spot market SCUC model Considering Different StartUp and Shutdown States Based on Pyomo

Investigation on Participation of the Storage System in Guangdong Electricity Market

Collaborative Operation Integrating Wind and Solar Generation with Hydrogen and Ammonia Production

PUBLICATIONS

Journal

- Multi-year Planning for the Integration Combining Distributed Energy System and Electric Vehicle in Neighborhood Based on Data-driven Model
Xin Li, Lunding Guo, Yuchen He, Guotian Yang,
International Journal of Electrical Power and Energy Systems, Q1, 2022,published
DOI: <https://doi.org/10.1016/j.ijepes.2022.108079>
- An optimization framework for low-carbon oriented integrated energy system management in commercial building under EV demand response
Zensen Wang, **Xin Li**, Yu Li, Tianqi Zhao, Xue Xia, Hanzhi Zhang
Processes, Q2, 2021, published
DOI: <https://doi.org/10.3390/pr9101737>
- Gabor-GLCM-Based Texture Feature Extraction Using Flame Image to Predict the O₂ Content and NO_x
Guotian Yang, Yuchen He, **Xin Li**, Xinli Li
ACS Omega, Q2, 2022, published
DOI: <https://doi.org/10.1021/acsomega.1c03397>
- Research on integrated energy supply priority scheduling based on Fbprophet load forecast and customer satisfaction constraint
Yukai Li, Jiabing Han, Quan Wang, Meng Yang, Jun Zhao, **Xin Li**, Xinli Li
Journal of North China Electric Power University(CN), 2021, published

- Boiler flame motion feature extraction and correlation analysis based on improved optical flow method
Guotian Yang, Yuchen He, **Xin Li**, Xinli Li
Journal of North China Electric Power University(CN), 2021, published
- Modeling of boiler variable-load combustion system based on GBDT-BidGRU
Guotian Yang, Yuchen He, **Xin Li**, Xinli Li
Thermoelectric Power Generation(CN), 2021, published

Conference

- Power system evolutionary planning based on LHS-kmeans method for generating future load scenarios, Zensen Wang, **Xin Li**, Yu Li, Tianqi Zhao, Xue Xia, Hanzhi Zhang, 2021 3rd International Conference on Smart Power & Internet Energy Systems (SPIES), 2021
- Carbon neutral planning for high percentage of renewable power systems considering WIPP as inertia support, Zensen Wang, **Xin Li**, Yu Li, Tianqi Zhao, Xue Xia, Hanzhi Zhang, 2021 IEEE Sustainable Power and Energy Conference (iSPEC), 2021

REFERENCES

- **Prof.Guotian Yang**
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Relationship:Prof.Guotian Yang is the supervisor of my master program
- **Dr.Zesen Wang**
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Relationship:Dr.Zesen Wang is the supervisor of my internship
- **Dr.Xiaowen Lai**
CTO of Tsintergy Technology
Tsintergy Technology
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Add: No.108. Tiyu East Road, Tianhe District, Canton. 510620
Relationship:Dr.Xiaowen Lai is the leader of the team I belonged in Tsintergy Technology