

Yongheng Wang

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EDUCATION

The University of Hong Kong Ph.D. Student in Electrical Engineering	Sep. 2024 – Present
Tsinghua University M.Phil. in Electrical Engineering	Sep. 2021 – Jun. 2024
South China University of Technology B.Eng. in Electrical Engineering and Automation	Sep. 2017 – Jun. 2021
Imperial College London Summer School on Inverter-Based Resources-Dominated Power Systems	Aug. 2025 – Sep. 2025

PUBLICATIONS

Journals

- J1 **Y. Wang**, X. Shen, and Y. Xu, “*Joint Planning of Active Distribution Network and EV Charging Stations Considering Vehicle-to-Grid Functionality and Reactive Power Support*”, *CSEE Journal of Power and Energy Systems*, 2024. (Published)
- J2 **Y. Wang** and X. Shen, “*Integrated Planning of Multi-Charging Infrastructure and Urban Distribution Networks Based on Smart Transportation Systems*”, *Applied Energy*, 2025. (Under second review)
- J3 **Y. Wang**, “*Tri-Level Two-Stage Stochastic-Robust Planning of Renewable Charging Stations and Distribution Networks: An Adaptive iC&CG Algorithm*”, working paper.
- J4 W. Gao, **Y. Wang**, and X. Shen, “*Distributionally Robust Planning of PV-Storage-EV Stations and Low-Carbon Coastal City Distribution Network with i-C&CG Algorithm*”, *IEEE Transactions on Sustainable Energy*, 2025. (Under review)
- J5 H. Wang, X. Shen, and **Y. Wang**, “*Dynamic Reactive Power Optimization Based on Modified Generalized Benders Decomposition*”, *IEEE Transactions on Power Systems*, 2025. (Under second review)
- J6 C. Wei, **Y. Wang**, and X. Shen, “*Synergistic Planning of Photovoltaic Energy Storage-Charging Stations and Hydrogen Refueling Stations Considering Carbon Emission Flows*”, *Automation of Electric Power Systems*, 2023. (Published; in Chinese)

Conferences

- C1 **Y. Wang**, R. Cui, and T. Liu, “*Two-Stage Robust Planning of Distribution Networks with Renewable Charging Stations: A Strong Optimization Framework*”, in *2026 IEEE PES International Meeting (PESIM)*, Hong Kong, China, 2026. (Published)
- C2 G. Liu, **Y. Wang**, et al., “*Coordinated Planning of Active Distribution Network and V2G Charging Stations Considering the Load Characteristics of V2G Stations*”, in *2022 IEEE 6th Conference on Energy Internet and Energy System Integration (EI2)*, Chengdu, China, 2022. (Published)
- C3 G. Liu, W. Chen, **Y. Wang**, et al., “*Co-Planning of ADN and EV Charging Stations Considering EV Spatial Migration and Sequential Charging Characteristics*”, in *2023 8th Asia Conference on Power and Electrical Engineering (ACPEE)*, Tianjin, China, 2023. (Published)

Patents

- P1 X. Shen, **Y. Wang**, et al., “*Method for Joint Planning of Active Distribution Network and V2G Charging Stations*”, Chinese Patent 202310630383.X, 2023.

- P2 G. Liu, W. Zheng, **Y. Wang**, et al., “*Experimental Device for Simulating Different Contact States of Plum Blossom Contacts by Adjusting the Insertion Depth of Static Contacts*”, Chinese Patent ZL201911315956.X, 2021.
- P3 X. Shen, W. Chen, **Y. Wang**, et al., “*Method for Collaborative Planning of New Energy Vehicle Charging Stations Considering Carbon Emission Flow*”, Chinese Patent 202311022600.3, 2023.
- P4 W. Tang, Y. Zhao, C. Zhong, X. Zhao, X. Shen, **Y. Wang**, et al., “*Method for Optimal Location and Sizing of Wind, Solar, and V2G Charging Stations in Distribution Networks Based on Improved Beetle Antennae Search Particle Swarm Algorithm*”, Chinese Patent 35082119900201004.X, 2022.

PROJECTS

- Sep. 2024 – Present, National Natural Science Foundation of China, *Dissipativity-Based Distributed Event-Triggered Control of Complex Dynamic Networks and Its Applications to Microgrid Control*. Key Researcher
- Sep. 2024 – Present, Research Grants Council of the Hong Kong Special Administrative Region (Early Career Scheme), *Small-Signal Stability Analysis of Power Systems with High Penetration of Converter-Interfaced Generation*. Key Researcher
- Jan. 2022 – Nov. 2024, China Southern Power Grid Corp., *Key Technology and Demonstration for Large-Scale Electric Vehicle Interactions with the Power Grid*. Key Researcher
- Sep. 2021 – Dec. 2023, National Natural Science Foundation of China, *Research on Data-Driven Planning Method for Integrated Energy Distribution System Considering Multiple Energy Storage*. Key Researcher
- Sep. 2020 – Jun. 2021, National Natural Science Foundation of China, *Damage Mechanism of Lightning Current on Tensioned Stranded Metallic Ground Wires*. Participant

EXPERIENCE

China Southern Power Grid Company Limited Intern, Guangzhou Power Supply Bureau	Jun. 2018 – Sep. 2018
China Southern Power Grid Company Limited Intern, Shenzhen Power Supply Bureau	Apr. 2022 – Dec. 2022

AWARDS

- **Postgraduate Scholarships of The University of Hong Kong** 2025
- **Third Prize of Professional Practice**, Tsinghua University (Top 10%) 2024
- **Outstanding Graduate**, Tsinghua University (Top 2%) 2023–2024
- **Outstanding Graduation Thesis**, Tsinghua University (Top 5%) 2023–2024
- **Best Poster Award**, International Workshop on Learning and Information Theory (Top 2%) 2023
- **First Prize Scholarship**, Tsinghua University (Top 5%) 2022–2023
- **Outstanding Graduate**, South China University of Technology (Top 5%) 2021–2022
- **National Scholarship** (Top 2%) 2019–2020
- **Outstanding Student Leader**, South China University of Technology (Top 5%) 2019–2020
- **National Scholarship** (Top 2%) 2018–2019
- **Outstanding Member of Student Union**, South China University of Technology (Top 5%) 2018–2019
- **Outstanding Intern in Power Grid**, South China University of Technology (Top 5%) 2018–2019
- **Kang Dewei Innovation Scholarship**, South China University of Technology (Top 10%) 2017–2018

LEADERSHIP

Tsinghua University Student Union

Member, Practice Department

Mar. 2022 – Dec. 2022

Tsinghua International Graduate School

Monitor, Electrical Engineering Class 21

Oct. 2021 – Aug. 2022

South China University of Technology Student Union

Secretary, Department of Manpower and Liaison

May 2018 – Jul. 2019

Student Innovation Club of South China University of Technology

Member, Outreach Practice Department

Mar. 2018 – Aug. 2018

Art Group of South China University of Technology

Leader, Host Team

Jul. 2017 – Jun. 2019

SKILLS

Programming: MATLAB, Python, C++

Software: Microsoft Office, L^AT_EX, Photoshop

Languages: English, Chinese

Updated September 2025