ZHIMENG WANG

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EDUCATION

• **Tsinghua University** *Sept. 2021 - Jun. 2024 (prospective)*
◦ M.S. in Electrical Engineering GPA: 3.84/4.00
◦ Supervisors: Prof. Hongbin Sun, Prof. Xinwei Shen.
◦ Course works: Distributed Control and Optimization of Power Systems (4.0), Large Network Steady-State Analysis (4.0), Learning from Data (4.0), Introduction of Smart Grid (4.0), etc.

• **University of California, Berkeley** *Aug. 2019 - Dec. 2019*
◦ Exchange student
◦ Course works: Introduction to Electric Power Systems, Optimization Models in Engineering, etc.

• **Beijing University of Chemical Technology** *Sept. 2017 - Jun. 2021*
◦ B.S. in Automation, ranked 7/153 (top 5%) GPA: 88.73/100
◦ Course works: Classical Control Theory (94), Modern Control Theory (95), Process Control Engineering (93), Optimal Control (91), General Physics (97), etc.

PUBLICATIONS

[1] **Zhimeng Wang**, Ang Xuan, Xinwei Shen, Yunfei Du, Hongbin Sun, "A robust planning model for offshore microgrid considering tidal power and desalination", *Applied Energy*, 2023, 350: 121713. [PDF][Slides]
◦ A two-stage robust model of an offshore microgrid considering tidal power generation and seawater desalination is proposed.
◦ Uncertainty set of tidal power generation is defined in terms of the tidal level.
◦ Scenarios with different tidal delay is simulated.
◦ Complementarity between tidal power generation and the other renewable energy sources is proved.

[2] Jiajia Huan, **Zhimeng Wang**, Yunfei Du, Xinwei Shen, Baihao Qiao, Chungeng He, Xiaodong Lan, Shuxin Luo, "Boundary Inference of Load Scenarios in Multi-energy Parks Based on Statistical Learning", *2023 5th International Conference on Power and Energy Technology (ICPET)*, Tianjin, China, 2023, pp. 1530-1535. [PDF][Slides]
◦ Selected as the **"best student paper finalist"** and I delivered an **oral speech**.
◦ Proposed a method to determine boundaries of uncertainty sets of load scenarios in robust optimization that requires no information about past data.

INDUSTRIAL PROJECTS

• **Research on Energy Efficiency Data Mining Technology for Multi-energy Complementary Park Planning** *Sept. 2021- Jun. 2023*
◦ A cooperative project between China Southern Power Grid Guangdong Power Grid Co. LTD and Shenzhen International Graduate School, Tsinghua University.
◦ The project focuses on giving benefit analysis of park-level integrated energy system transformation planning based on electricity substitution.
◦ **My contributions**: **Conducted** the part of the project of providing boundary of uncertainty sets of the load scenarios with no request for former data; **Submitted a patent** entitled "Method, Device, Terminal Equipment, and Storage Medium for Determining the Load Boundary of Multi-energy Parks"; **Published a conference paper** entitled "Boundary Inference of Load Scenarios in Multi-energy Parks Based on Statistical Learning"; **Drafted research reports**; Wrote part of the **back-end code** for a software.

• **Research on Stochastic Programming Methods of Integrated Energy System Considering Operation** *Jun. 2021 - Sept. 2021*
◦ This is a cooperative project between Electric Power Research Institute, China Southern Power Grid and Shenzhen International Graduate School, Tsinghua University.
◦ The project focuses on providing integrated energy systems with a planning method while considering uncertainties in a stochastic programming manner.
◦ **My contributions**: **Wrote and debugged** the codes; **Drafted research reports**.

EXTRACURRICULAR EXPERIENCES

- **League Secretary**, Tsinghua University *Sept. 2021 - present*
- **Volunteer**, Tsinghua University *for multiple times*
  - Alumni Association Board Logistics, Alumni Association Founding Meeting Logistics, Freshmen welcoming
- **League Secretary**, Beijing University of Chemical Technology *Sept. 2017 - Jun. 2021*

AWARDS AND SCHOLARSHIPS

- **First Class Scholarship**, Tsinghua University *Oct. 2023*
  - Awarded to around top 2% students with best overall performance in the previous academic year.
- **Second Class Scholarship**, Tsinghua University *Oct. 2022*
  - Awarded to around top 20% students with best overall performance in the previous academic year.
- **Beijing Outstanding Graduates**, Beijing Ministry of Education *Jun. 2021*
  - Awarded to around top 5% of graduates.
- **Merit Student**, Beijing University of Chemical Technology *Jun. 2021*
  - Awarded to the all-round excellent students.
- **BUCT-SUPCON Scholarship**, Beijing University of Chemical Technology *Oct. 2019*
  - Awarded to students with top 5% performance in the previous academic year.
- **Second Prize, National Physics Competition for College Students**, Beijing Physics Society *Dec. 2018*
  - I **ranked #1** among all the participating students from Beijing University of Chemical Technology.
- **BUCT-E+H Scholarship**, Beijing University of Chemical Technology *Oct. 2018*
  - Awarded to students with top 5% performance in the previous academic year.
- **People's Scholarship**, Beijing University of Chemical Technology *for multiple times*
  - Awarded to the students with top 20% academic performance in the previous semester.

REFERENCES

- **Dr. Xinwei Shen, Assistant Professor, IEEE Senior Member**
  - Tsinghua Shenzhen International Graduate School, Tsinghua University, 518000, Guangdong, China
  - E-mail: xwshen@tsinghua.edu.cn; sxw.tbsi@sz.tsinghua.edu.cn
- **Dr. Qiuwei Wu, Associate Professor, IEEE Senior Member**
  - Tsinghua-Berkeley Shenzhen Institute, Tsinghua University, 518000, Guangdong, China
  - E-mail: quiwudtu@163.com
- **Dr. Hongbin Sun, Professor, IEEE Fellow**
  - Department of Electrical Engineering, Tsinghua University, 100084, Beijing, China
  - E-mail: shb@tsinghua.edu.cn

MISCS

- **Programming Languages**
  - MATLAB+YALMIP, Python, LaTeX
- **Professional Services**
  - Reviewer for 2024 Texas Power and Energy Conference, 2024 The 6th Asia Energy and Electrical Engineering Symposium, 2023 IEEE Conference on Energy Internet and Energy System Integration
- **Languages**
  - Mandarin (native language), English (professional working proficiency, TOEFL 109, GRE 325+4.5)
- **Hobbies**
  - Piano, badminton, tennis