Wang ZHANG

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EDUCATION

The University of Hong Kong Sep. 2024 – Jul. 2025

M.Sc. in Electrical and Electronic Engineering

Core modules: The Role of A Computerized SCADA System in Power System Operation, Smart Grid, Advanced Power System Operation, Extra-low-voltage Electrical Systems in Buildings

GPA: 3.18 / 4.3 (B)

South China University of Technology Sep. 2020 – Jun. 2024

B.Eng. in Electrical Engineering and Automation

Core modules: Electric Circuits, Electromechanics, Power System Analysis, Relay Protection, Power Electronics, Analog Electronics, Digital Electronics, Automatic Control Theory

GPA: 3.32 / 4.0 (80.87 / 100)

RESEARCH EXPERIENCE

Small-signal Modeling and Stability Analysis of Grid-connected PV Inverter Sep. 2024 – May. 2025

Supervisors: Dr. Y. C. Cheng and Prof. S. C. Chan

- Developed a state-space model of grid-following PV inverters by integrating dynamic characteristics of synchronous generators, their excitation systems, and power system stabilizers in MATLAB/Simulink, then identified critical oscillation modes via eigenvalue analysis, participation factor, and root locus methods
- Achieved A- for the Master's dissertation

Optimal Design for Multi-level Energy Exploitation Unit Based on Hydrogen Storage Nov. 2023 – May. 2024

Supervisor: Prof. Jiehui Zheng

- Conducted a literature review and analysis on energy storage methods and their siting and sizing plans
- Constructed a mathematical model with PV, hydrogen storage, methane reactor and carbon capture module, optimized the total system cost by Gurobi solver then compared its performance with a traditional battery storage system

Power Electronics Enabling Renewable Energy Apr. 2023 – Jul. 2023

Supervisor: Prof. Pohchiang Loh

- Enhanced photovoltaic inverter output waveforms and mitigated its leakage current issues by simulating modulation settings, circuit configurations, filtering methods, and control strategies in PLECS
- Wrote a review paper titled 'Recent Advances in Leakage Current Mitigation for Single-Phase Transformerless PV Inverter'

Small Signal Stability Analysis of PMSG-VSG Integrated Power System Jan. 2022 – Jan. 2023

Supervisor: Prof. Lin Zhu

- Established a small-scale power grid model consisting of a wind turbine, phase-locked loop and synchronous generator on MATLAB/Simulink for analyzing the small disturbance stability of the system
- Obtained power flow data via BPA and PSCAD simulations using actual grid node data, introduced small disturbance signals for eigenvalue and FFT analysis of the model, and assisted the supervisor's research as part of the team

INTERNSHIP EXPERIENCE

Fortune & Future Hong Kong Limited Feb. 2025 – Apr. 2025

Intern, Administrative Department

- Assisted in collecting, analyzing, and summarizing data information such as documents and inventory, and provided insights to optimize the efficiency of administrative work
- Participated in evaluating existing administrative processes, proposed SOP solutions, and assisted in their implementation to reduce operational costs

Xinhui Shuangshui Power Plant Co., Ltd. Aug. 2023 – Sep. 2023

Intern, Equipment Maintenance Department

- Assisted front-line electrical maintenance teams in performing routine maintenance and troubleshooting on primary equipment, gaining hands-on experience in power generation plant operations
- Shadowed the electrical relay protection team, participating in the operation and maintenance of secondary electrical equipment, deepening understanding of electrical systems

RELATIVE ACTIVITIES

Winter Program, Tokyo Metropolitan University Jan. 2024 – Feb. 2024

- **Program**: Japanese Language and Culture, sponsored by SCUT International Office

China Undergraduate Mathematical Contest in Modeling Sep. 2022

- **Award**: The Second Prize in Guangdong Contest District
- Analyzed the weathered relics to figure out their original conditions then processed various data with MATLAB and SPSSPRO
- Visualized the results through plotting with Visio and composed the paper

Social Practice and Science Competition on Energy Conservation and Emission Reduction May. 2022

- **Award**: The Third Prize at the school level (SCUT)
- Analyzed the bulk carrier selection and the principles of distributed power sources then optimized the ship's DC microgrid to maximize its economic and environmental advantages
- Constructed a physical ship microgrid model that incorporated a wind-solar complementary power generation system to present

Summer School, The Chinese University of Hong Kong Aug. 2021

- **Program**: Reading Nature, tutored by Dr. Winghung Wong

ADDITIONAL INFORMATION

- **Languages**: Cantonese (Native); Mandarin (Native); English (Fluent, IELTS 6.5)
- **Skills**: Python, C++, MATLAB/Simulink, CAD, MS Office, Visio, LaTeX
- **Interests**: Scuba diving (PADI Open Water Diver), Photography, Investment

Last Updated on August 15, 2025