

YANXI JIANG

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EDUCATION EXPERIENCE

- **The University of Liverpool, Liverpool, UK. GPA: 3.82/4.0.** 09/2021-04/2023
MRes in Low Carbon Electrical Power and Energy Technology.
Study at Xi'an Jiaotong-Liverpool University, Suzhou, China.
- **Murdoch University, Perth, Australia.** 06/2019-07/2019
Course study in Principles of Electronic Instrumentation.
- **Shenyang Institute of Engineering, Shenyang, China. GPA: 3.33/4.0.** 09/2017-06/2021
BEng in Electrical Engineering and Automation.

PROFESSIONAL SKILLS

- **MATLAB & MATPOWER Programming for Power System Steady State Analysis.**
- **MATLAB Simulink for Wind Turbine Generation and Grid-connected Control.**
- **Laboratory Testing of Electronic Circuits and Power Grid System Components.**
- **PSASP Computation and Simulation in Power System Static and Transient Stability.**
- **ICAP/4 or Multisim SPICE Circuit (Analogue and Digital) Simulation and Analysis.**
- **PSIM Simulation for Renewable Energy Generation and PVsyst for PV System Design.**

PAPER PUBLICATIONS

- [1] Y. Jiang, Q. Zhang and F. Zhong, "Ultra-short-term PV Power Forecasting Based on FA-DELM Model Considering Weather Classification and VMD Noise Reduction," 2022 IEEE 4th International Conference on Civil Aviation Safety and Information Technology (ICCASIT), Dali, China, 2022, pp. 1229-1239, doi: 10.1109/ICCASIT55263.2022.9986720.

RESEARCH OR PROJECT EXPERIENCE

Planning of Distributed Generation in Active Distribution Networks Based on Virtual Microgrids, Final Master Project

02/2022-12/2022

- Upgrading existing conventional distribution networks to active distribution networks for active energy management purposes.
- Partitioning the boundaries of the conventional distribution networks to establish Virtual Microgrids.
- Designing objective functions and constraints for distributed generation and optimal cost functions for battery energy storage system.
- Allocating distributed generation and battery energy storage system, determining parameters such as siting and capacity, and realized by genetic algorithm, MATPOWER and MATLAB Programming.

Grid-connected Control Analysis of Direct-driven Permanent Magnet Synchronous (PMSG) Wind Turbines

03/2021-03/2022

- Delivered a virtual synchronous machine (VSM) scheme to overcome rotor inertia and grid instability caused by large-scale wind power integration.
- Modelling of the electrical and mechanical parts of a PMSG and its grid-connected operation
- Imported of Synchronverter theory to construct a large capacity virtual synchronous generator (VSM).
- Applied robust droop control techniques for load sharing of grid-connected inverters and simulation.
- Employed VSM to achieve conventional generator rotor and grid side operation for grid-connected.

Design of An Electricity Market for A Higher Education Town Power System with A High Penetration Level of Distributed Generation

11/2021-12/2021

- Analyzed the structure of the UK, USA and China electricity market and how it operates.
- Listed the entities included in the electricity market (ISOs, GENCOs, TRANSCOs, DISCOs, Aggregators, Marketers, Customers and Regulatory Commission etc.) and explain how they operate.
- Designed a specific electricity market for a higher education town with high renewable energy access.

Speed Detector Design Project Leader (Murdoch, Australia)

06/2019-07/2019

- Designed the monostable oscillation multivibrator, AND gate circuits and derivate key parameters.
- Used the SPICE simulation software to draw circuit schematic diagrams, test and analyze circuits.
- Built a laboratory testing environment for realizing speed detection and selection based on available components: Transistors (BC547), Op-Amp (LM324), Diodes (1N914), Optocoupler (BPI-3CI-13) etc.

INTERNSHIP EXPERIENCE

Lab Technician, Xi'an Jiaotong-Liverpool University, China

12/2022-06/2023

- In charge of School laboratory daily management;
- Work closely with University Health and Safety Office, Campus Management Office, Management Information Technology and System Office, and audit bodies to identify and raise awareness of health and safety hazards in the School laboratories and ensure laboratories to meet the safety standards at all aspects;
- Develop and maintain instruction manual and technical/operational standards;
- Assist with the planning, procurement, installation and care/maintenance of laboratory equipment;
- Prepare laboratory materials for teaching and research;
- Organise and maintain stockrooms, and ensure the storage of any laboratory supplies;
- Maintain accurate records budget and expense information;
- Provide training and supervision for undergraduate and postgraduate students and postdoctoral research staff in the use of equipment.

Professional Development Programme and Program With C++/R Module, Teaching Assistant, Xi'an Jiaotong-Liverpool University, China

06/2022-12/2022

- Student Programming Lab Q&A.
- Online and Onsite Tutorial Teaching.
- Coordinating and collecting feedback from students.
- Presentation and Report marking, and Attendance Recording.

Applied Technology Center, CNNP Kunhua Energy Development Co., Ltd, Hangzhou, Zhejiang Province, China

02/2022-04/2022

- Participated in planning and constructing photovoltaic, wind and solar thermal power station projects.
- Translated and collocated related renewable energy technology english publications.
- Created quarterly reports on advanced renewable energy technology tracking.

Skills Training Center, State Grid Liaoning Electric Power Supply Co., Ltd, Jinzhou, Liaoning Province, China

05/2021-05/2021

- Compulsory graduation internship module in grid's transmission, substation, and distribution sectors.
- Climbed electrical power transmission towers and tested power system relay protection devices.
- Maintained and operated substation equipment and drew its main wiring diagrams.

AWARDS & HONORS

- Excellent Campers, the Hong Kong University of Science and Technology (Guangzhou). 08/2022
- Special-Class (**Top 1%**) Scholarship of Shenyang Institute of Engineering (SIE). 06/2021
- Annual 2020 Academic Advanced Individual of Scientific Research, SIE. 04/2021
- Second-Class (**Top 10%**) Scholarship of Shenyang Institute of Engineering. 10/2020
- Third-Class Scholarship (**Top 25%**) of Shenyang Institute of Engineering. 11/2019
- Visiting-Civilization Ambassador Scholarship of Shenyang Institute of Engineering. 09/2019
- Certificate for Intermediate Electrician Occupational Qualification. 04/2019
- Annual 2018 Academic Advanced Individual of Scientific Research, SIE. 03/2019
- Third Prize of Province, China Undergraduate Mathematical Contest in Modeling. 11/2018
- Star of Innovation Scholarship of Shenyang Institute of Engineering. 09/2018

PROFESSIONAL MEMBERSHIPS

- IEEE Industry Applications Society (IAS) Member 07/2023-Present
- IEEE Power Electronics Society (PELS) Member 06/2023-Present
- The Institution of Engineering and Technology (IET) Student Member 05/2023-Present
- IEEE Power & Energy Society (PES) Member 11/2022-Present
- China Energy Research Society (CERS) Student Member 05/2022-Present
- IEEE Member 04/2021-Present
- Chinese Society for Electrical Engineering (CSEE) Student Member 08/2021-Present
- China Electrotechnical Society (CES) Student Member 11/2021-Present
- China Power Supply Society (CPSS) Student Member 08/2021-Present