KAIJIA HUANG

Student in MSc Sustainable Energy in Technical University of Denmark | tel: 53890790 | kihuang@yahoo.com

SUMMARY

- 6 years electrical design experience in nuclear power industry, specialising in 380V AC auxiliary systems study.
- Self-motivated, problem-solving and collaborative student with excellent communication skills.
- Professional skilled in electrical engineering, experienced programming in Matlab, Python and Excel.
- Interest in electrical system design, plant operations and maintenance.

EDUCATION

- MSc, Sustainable Energy - Study Line in Wind Energy, Technical University of Denmark, 2019-2021
- MSc, Power System Engineering, The University of Manchester, 2013
- BEng, Electrical and Electronic Engineering, Cardiff University, 2012
- Bechelor,Electrical Engineering and Automation, Nourth China Electric Power University, 2012

EMPLOYMENT EXPERIENCE

China Nuclear Power Engineering co.Ltd *Oct 2013 to July 2019*

- Expertise in designing, troubleshooting, updating the electrical power systems for HPR1000 nuclear power plants. Prepare engineering documents.
- Conduct detail design of cable works, load lists, switchboards, junction cabinets and control scheme, diesel generator sets, transformer and protective devices, layout plan, etc.
- Reviewing, clarifying and negotiating technical documents from vendors and fabricators.
- Managing interfaces with shareholders, vendors, the other disciplines and project managers.
- Support sales team, site engineers to ensure the project delivery quality and time of launching.

TECHNICAL SKILLS

- **Electrical Engineering:** Power system analysis, simulation,design;LV auxiliary power system analysis.
- **IT Skills:** Matlab/Simulink, RSCAD, Python, MS Office 365, basic VBA, AutoCad drawing.
- **Electronic Lab:** Breadboard circuit assembling, soldering, handling oscilloscopes, Labview, etc.
- **Wind Energy:** Modelling wind-wave impacted aerodynamics and structure dynamics of wind turbine and its foundation.

RESEARCH EXPERIENCE

Technical University of Denmark & Ørsted Wind Power A/S **MSc Thesis**

Feb 2020 to Jun 2020

- Advanced Condition Monitoring and Data-based Maintenance of HV-cable systems in Offshore Windfarm export systems.

Technical University of Denmark **MSc Coursework**

Sept 2019 to present

- Power system modelling with renewable source with Matlab/Simulink.
- Use RSCAD and RTDS hardware to preform power system dynamic study and hardware-in-the-loop test.
- Model wind-wave climate and its aerodynamics on wind turbine structure with Matlab.

China Nuclear Power Engineering co.ltd *2017*

- Nuclear island junction boxes design optimisation
- Nuclear island electrical equipment seismic fragility assessment (with Simpson Gumpertz & Heger)

The University of Manchester **MSc Thesis**

Identification of Probabilistic Distribution of Electromechanical Modes. *2013*

Supervised by Prof. Jovica V. Milanović.

- Comparison study on numerical and analytical methods on probabilistic power system eigenmodes estimation.
- Small signal stability analysis with Matlab and 'Matpower' package.
- Processing simulation data; mathematical model regression.

Cardiff University **Bachelor Project**
Comparative study of I-V measurements based on current source technique and voltage source technique. *2012*
Supervised by Prof. Gao Min

- Conducting measurement in electronic lab
- Design and craft a device to hold a thermal-electric specimen.
- Analysing and visualising measurement data.

PUBLICATIONS

- Yang, Q., Li, J., Santos, R., **Huang, K**., Igic, P. (2021). Intelligent fault detection and location scheme for modular multi-level converter multi-terminal high-voltage direct current. High Voltage, 6(1), 125-137.
- R. Preece, **K. Huang** and J. V. Milanović, "Probabilistic Small-Disturbance Stability Assessment of Uncertain Power Systems Using Efficient Estimation Methods," in IEEE Transactions on Power Systems, vol. 29, no. 5, pp. 2509-2517, Sept. 2014
  Main Contribution: Comparison study on the Monte Carlo (MC), Two Point Estimate method, Gram Charlier method and Probability Collocation Method (PCM) in terms of efficiency and compatibility.
- R. Preece, **K. Huang**. and J. V. Milanović, "Comparison of point estimate and cumulant techniques for efficient estimation of critical oscillatory modes," 2014 IEEE PES General Meeting | Conference & Exposition, National Harbor, MD, 2014, pp. 1-5

REFERENCES

- Jianwei Li, University of Oxford, Senior research fellow, jianwei.li@eng.ox.ac.uk
- Fabio Pierella, Technical University of Denmark, Researcher, fabpi@dtu.dk