Pudong Ge

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Education

Imperial College London — London, UK
PhD student in Electrical Engineering — *Sep. 2019 – Present*

Southeast University — Nanjing, China
MSc in Electrical Engineering — *Sep. 2016 – June 2019*

Nanjing University of Science & Technology — Nanjing, China
BEng in Electrical Engineering & Automation — *Sep. 2012 – June 2016*

Research Interest

I am broadly interested in distributed control and optimisation in cyber-physical systems with applications to power systems, especially in resilient operation of power systems with renewables, cyberattack detection and mitigation in power system control, and etc.

Experience

Imperial College London — London, UK
Research Assistant — *Nov. 2020 – Present*

- **Project:** Energy for Development - Low Carbon Energy and Industry for Economic Growth in Mongolia, GCRF
- **Subtopic:** Energy infrastructure in Mongolia: local, national and international perspective

Teaching Assistant — *Sep. 2020 – Jan. 2021*

- **Module:** Electrical Energy Systems; Debating and Non-technical / Soft Skills Development (Energy Future Lab)
- **Responsibility:** General administration; Panopto (Lecture recording); Marking; Tutorial support

Southeast University — Nanjing, China
Graduate Student Researcher/Research Assistant — *Sep. 2016 – June 2019*

- **Control of Active Distribution Network with Dynamic Control System:** Developed an extended state observer-based distributed robust secondary voltage and frequency control for an autonomous microgrid (MG) with inverter-based distributed generators (DGs) considering the uncertainties from models and measurement noise
- **Technologies and Demonstration of Applications of Distributed Renewable Energy Generation Clusters:** Developed a virtual cluster mechanism, clarified its concept and virtual cluster division method for distributed PV(photovoltaic) based on community theory

Nanjing University of Science and Technology — Nanjing, China
Undergraduate Teaching Assistant — *March 2014 – Dec. 2014*

- **Module:** Electric Machinery; Power System Analysis
- **Responsibility:** Peer mentoring; Online after-class tutoring lecture

Selected Publications

1. **P. Ge**, B. Chen, and F. Teng, "Event-triggered Distributed MPC for resilient voltage control of an islanded microgrid", *International Journal of Robust and Nonlinear Control*, Early Access, doi: 10.1002/rnc.5238.
2. **P. Ge**, Y. Zhu, T. Green, and F. Teng, "Resilient Secondary Voltage Control of Islanded Microgrids: An ESKBF-Based Distributed Fast Terminal Sliding Mode Control Approach", *IEEE Transactions on Power Systems*, Early Access, doi: 10.1109/TPWRS.2020.3012026.
3. **P. Ge**, X. Dou, X. Quan, Q. Hu, W. Sheng, Z. Wu and W. Gu, "Extended-State-Observer-Based Distributed Robust Secondary Voltage and Frequency Control for an Autonomous Microgrid", *IEEE Transactions on Sustainable Energy*, vol. 11, no. 1, pp. 195-205, Jan. 2020.
4. **P. Ge**, Q. Hu, Q. Wu, X. Dou, Z. Wu, and Y. Ding, "Increasing operational flexibility of integrated energy systems by introducing power to hydrogen", *IET Renewable Power Generation*, vol. 14, no. 3, pp. 372-380, Nov. 2019.

Academic Activities

Professional Affiliations: Member, IEEE & IEEE Power and Energy Society (PES)

Reviewer of International Journals: IEEE Transactions on Sustainable Energy; IEEE Transactions on Industry Applications; International Journal of Electrical Power and Energy Systems; CSEE Journal of Power and Energy Systems; Control Engineering Practice