

CURRICULUM VITAE

NAME: JINGJIE YANG

Institute: Institute of Energy System

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Education

2017.9-Present The University of Edinburgh

2014.8-2017.6 China Electric Power Research Institute, Beijing, China

- Degree: Master of engineering (expected in June 2017) • Major: Electrical Engineering
- GPA: 88% • Research Field: Hybrid energy system operation optimization

2010.8-2014.7 Tsinghua University, Beijing, China

- Degree: Bachelor of engineering • Major: Electrical Engineering • GPA: 84%
- Graduation Thesis: Automatic voltage control considering economic and security coordination

Journal List

- [1] **Jingjie Yang***, Bingqing Guo, Limin Jiang, Bo Qu, Wei Huang. Optimization of Hybrid Energy System Based on Peak Load Management. International Conference on Global energy interconnection (GEI), 2016.
- [2] Bingqing Guo*, **Jingjie Yang**, Bo Qu, Yan Qi, Xingwei Liu, Yingqiu Wang. Dynamic Frequency Control Strategy for Power System Based on HVAC Load. Proceedings of the CSU-EPSA, Vol. 28, No. 11, 2016.
- [3] **Jingjie Yang***, Bingqing Guo, Bo Qu. A Multi-Time Scale Economic Optimization Method for Hybrid Energy System Based on Virtual Storage. Journal of Modern Power Systems and Clean Energy, 2016. (Submitted)

Patents of Invention

- [4] **Jingjie Yang**, Bo Qu, Bingqing Guo, Huaguang Yan, Limin Jiang, Ming Zhong, Wei Huang, Yan Qi. An Optimization Method for Hybrid Energy System with Wind and Solar Energy (201610274650.4).
- [5] **Jingjie Yang**, Bo Qu, Bingqing Guo, Huaguang Yan, Limin Jiang, Ming Zhong, Wei Huang, Yan Qi. A Power Dynamic Balancing Method for Regional Grid Based on thermostatically controlled load (201610278735.X).

Research Experience

2015.6-2016.5 Research on Operation Optimization of Hybrid Energy System for Urban Parks Based on Load Flexibility (Supervisor: Prof. Bingqing Guo)

- Built an operation optimization model of hybrid energy system with Matlab, and proved effectiveness on Binhai Industry Research Institute in Tianjin.
- Using virtual storage characteristic of different users of hybrid energy system completed the operation optimization of system, and successfully saved operation cost by 5%-15%.

2016.8-2016.12 Intern at R&D Center, EDF (China) Holding Ltd., Beijing (Supervisor: Dr. Xingyan Niu)

- Participated in the regional multi-energy system coordination optimization project, completed basic analysis and comparison between two demonstrators in Tianjin and Shanghai, and summarized the KPI system for local energy systems and urban district.
- Participated in micro-grid project, acquired real-time monitoring and operation control of campus microgrids, and helped building real-time optimization software draft.
- Summarized the current status and future trends of energy storage in China, and completed a

summary report focusing on the economic analysis of energy storage technologies.

- 2015.1-2016.5 Research on Characteristic of Thermostatically Controlled Load and Demand-side Response and control strategy of Hybrid Energy System (Supervisor: Prof. Bingqing Guo)**
- Took heat pump as an example, summarized the external characteristic of thermostatically controlled load, and proposed a power and frequency dynamic control strategy.
 - Achieved power balance and frequency stabilization of regional power grid using proposed strategy, and successfully proved the effectiveness of this strategy on a single-machine system.
- 2015.3-2015.12 Research and Development of Short-term Electricity Load Forecast (Supervisor: Prof. Bingqing Guo)**
- Acquired various electricity load forecast methods, historical similar day selecting principles, and various impact factors of electricity load.
 - Using Error Back Propagation Neural Network, completed algorithm research of short-term electricity load forecast, and successfully proved the effectiveness on a region in China.
- 2013.6-2014.6 Research on Economic and Security Coordination Automatic Voltage Control of Malaysia National Grid (Graduation project, Supervisor: Prof. Hongbin Sun)**
- Acquired power flow optimization methods, completed static security analysis of Malaysia power grid with C++, and summarized voltage out-of-limit situations in typical days.
 - Proposed a voltage regulation strategy in power flow optimization suitable for different situations, and successfully proved the effectiveness on Malaysia power grid.
- 2013.7-2013.8 Intern at China Three Gorges Corporation, Yichang City, Hubei Province, China**
- Acquired the working principle of hydropower station and function of different equipments.
 - Joined routing inspection of 32 hydropower units and relevant electric control cabinets.

Research Techniques and Skills

- **Research Ability** Quick learning, strong consciousness of question, cooperative ability
- **English Ability** Proficient in scientific reading and writing, listening and speaking
- **Computer Skills** Preparation and presentation using Microsoft Office, proficient with Matlab and C++

Honors and Awards

- Academic and Research Pacesetter of China Electric Power Research Institute (2017.3)
- Outstanding graduate of China Electric Power Research Institute (2016.11)
- Third place in Nationwide English Speech Competition (2014.10)

Extra-curricular Activities

- Volunteer teacher of 'Maitian Program', in Suba junior high school, Mabian autonomous county, Sichuan province (2011.7-2011.8)
- Main member of student union for Electrical Engineering Department in Tsinghua University (2010.10-2011.12)
- Main member of art community in Tsinghua University (2010.10-2014.6)
- Main member of volleyball team for Electrical Engineering Department in Tsinghua University (2010.10-2014.6)
- Joined International Long-distance Running Competition and International Marathon in Beijing annually.
- Hobbies and Interests: good at volleyball, ping-pong and long-distance running, love painting, reading and travelling.