



## 陆帅

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### 陆帅

职称: 讲师、硕士生导师

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### 个人简介

陆帅, 博士, 2016年本科毕业于南京理工大学, 2021年博士毕业于东南大学, 师从顾伟教授, 2019年于澳大利亚新南威尔士大学联合培养, 合作导师董朝阳教授 (IEEE Fellow)。

主要从事电力及综合能源系统、优化理论、以及机理-数据融合计算等领域的研究。目前研究兴趣包括多能网络建模/仿真/估计、灵活资源聚合建模与控制、隐私保护优化与控制等。主持国家自然科学基金1项、国家重点研发计划子课题1项、2022年江苏省“双创博士”世界名校类人才项目等。获得2022年江苏省科学技术进步奖一等奖 (3/11) 和2022年中国仿真学会优秀博士学位论文奖。

共发表SCI/EI论文50余篇, 授权国家发明专利10余项, h因子19。担任**Applied Energy**、**Fontiers in Energy Research**、**电力信息与通信技术**等期刊编委。担任**IEEE Transactions on Power Systems/Smart Grid/Sustainable Energy**、**Applied Energy**、**Renewable & Sustainable Energy Reviews**、**Information Fusion**、**Artificial Intelligence Review**等期刊审稿人, 2020年获**IEEE Transactions on Power Systems**年度最佳审稿人。

每年可招生1~2名硕士研究生。

### 主要论文

- [1]Shuai Lu, Yijun Xu, Wei Gu, et al., "On Thermal Dynamics Embedded Static Voltage Stability Margin," **IEEE Transactions on Power Systems**, 2023, doi: 10.1109/TPWRS.2023.3246301.
- [2]Shuai Lu, Wei Gu, Yijun Xu, et al., "Unlock the Thermal Flexibility in Integrated Energy Systems: A Robust Nodal Pricing Approach for Thermal Loads," **IEEE Transactions on Smart Grid**, 2023, doi: 10.1109/TSG.2023.3258441.
- [3]Shuai Lu, Wei Gu, Shixing Ding, et al., "Data-Driven Aggregate Thermal Dynamic Model for Buildings: A Regression Approach," **IEEE Transactions on Smart Grid**, vol. 12, no. 1, pp. 227-242, Jan, 2022.
- [4]Shuai Lu, Wei Gu, Ke Meng, et al., "Thermal Inertial Aggregation Model for Integrated Energy Systems," **IEEE Transactions on Power Systems**, vol. 35, no. 3, pp. 2374-2387, May, 2020.
- [5]Shuai Lu, Wei Gu, Cuo Zhang, et al., "Hydraulic-Thermal Cooperative Optimization of Integrated Energy Systems: A Convex Optimization Approach," **IEEE Transactions on Smart Grid**, vol. 11, no. 6, pp. 4818-4832, Nov, 2020.
- [6]Shuai Lu, Wei Gu, Suyang Zhou, et al., "High-Resolution Modeling and Decentralized Dispatch of Heat and Electricity Integrated Energy System," **IEEE Transactions on Sustainable Energy**, vol. 11, no. 3, pp. 1451-1463, Jul, 2020.
- [7]Shuai Lu, Wei Gu, Ke Meng, et al., "Economic Dispatch of Integrated Energy Systems With Robust Thermal Comfort Management," **IEEE Transactions on Sustainable Energy**, vol. 12, no. 1, pp. 222-233, Jan, 2021.
- [8]Shuai Lu, Wei Gu, Suyang Zhou, et al., "Adaptive Robust Dispatch of Integrated Energy System Considering Uncertainties of Electricity and Outdoor Temperature," **IEEE Transactions on Industrial Informatics**, vol. 16, no. 7, pp. 4691-4702, Jul, 2020.
- [9]Shuai Lu, Wei Gu, Jinhui Zhou, et al., "Coordinated dispatch of multi-energy system with district heating network: Modeling and solution strategy," **Energy**, vol. 152, pp. 358-370, Jun 1, 2018.
- [10]Shuai Lu, Guannan Lou, Wei Gu, et al., "Optimal dispatch with flexible uncertainty set for multi-energy systems: an IGDT based two-stage decision framework," **CSEE Journal of Power and Energy Systems**, 2021, doi: 10.17775/CSEEJPES.2020.07150.
- [11]Shixing Ding, Wei Gu, Shuai Lu\*, et al., "Cyber-attack against heating system in integrated energy systems: Model and propagation mechanism," **Applied Energy**, vol. 311, 118650, 2022.
- [12]Wei Gu, Shuai Lu, Zhi Wu, et al., "Residential CCHP microgrid with load aggregator: Operation mode, pricing strategy, and optimal dispatch," **Applied Energy**, 2017, pp. 173-186.
- [13]Shuai Lu, Wei Gu, Shuai Yao, et al., "Dispatch of Integrated Energy Systems Considering Thermal Dynamics of Thermal Energy Storage," **IEEE PES General Meeting 2020**.
- [14]邱玥, 陆帅\*, 陆海, 等. "综合能源系统灵活性: 基本内涵、数学模型与研究框架," **电力系统自动化**, vol. 46, no 17, pp. 16-43, 2022.
- [15]顾伟, 陆帅, 王珺, 等. "多区域综合能源系统热网建模及系统运行优化," **中国电机工程学报**, vol. 37, no. 5, pp. 1305-1315, 2017. (F5000)
- [16]顾伟, 陆帅, 姚珺, 等. "综合能源系统混合时间尺度运行优化," **电力自动化设备**, vol. 39, no. 8, pp. 203-213, 2019.

### 授权专利

- [1]Wei Gu, Shuai Lu, et al., Integrated energy system optimization method based on heating grid and home thermal inertia, US11016455B2. (美国专利)
- [2]顾伟, 陆帅, 等. 一种基于运行优化模型的多区域综合能源系统运行方法, CN106447113B.
- [3]顾伟, 陆帅, 等. 基于两阶段协调优化与控制的冷热电联供型微网运行方法, CN106505634B.
- [4]顾伟, 陆帅, 等. 一种基于鲁棒优化的冷热电联供型微网运行方法, CN106786793B.
- [5]顾伟, 陆帅, 等. 一种综合能源系统两阶段鲁棒优化调度方法, CN109298634B.
- [6]顾伟, 陆帅, 等. 考虑电热双重不确定性的综合能源系统鲁棒优化调度方法, CN109034508B.

### 科研项目

- (1) 国家重点研发计划项目, 促进系统调节能力提升的城市级电-气-热-储多能协同调控关键技术, 2023.01~2016.12, 子课题负责人
- (2) 国家自然科学基金(青年)项目, "双碳"目标下电热耦合系统灵活资源物理-数据联合驱动聚合建模与动态定价方法, 2023.01~2025.12, 主持
- (3) 2022年江苏省"双创博士"项目, 主持
- (4) 中国南方电网公司项目, 考虑灵活资源的区域多能系统多层级调控研究, 2022~2024, 主持
- (5) 江苏省电力公司, 面向碳交易的综合能源系统能量流-碳流建模与优化研究服务, 2022~2023, 主持
- (6) 国家重点研发计划, "一带一路"共建国家城市智慧能源网络协同能量管理与运行优化技术联合研发与示范, 2020~2023, 参与
- (7) 国家自然科学基金智能电网联合基金项目, 能源市场环境多能互补系统协调运行理论及方法研究, 2019-2022, 参与

### 荣誉奖励

- (1) 2022年江苏省科学技术奖一等奖 (3/11)
- (2) 2021年中国电力科技技术进步一等奖 (13/15)
- (3) 2022年中国仿真学会优秀博士学位论文

### 教学

- (1) 本科生课程: 电工技术基础
- (2) 研究生课程: Computational Methods for Electric Power Systems (全英文)

