

导师简介: 庾明暕, 男, 博士, 讲师, 硕士生导师, 主要从事电力系统和人工智能领域的基础理论研究。近几年来, 作为负责人主持湖北省重点实验室开放基金项目2项, 近些年完成了一系列的理论研究工作, 以第一作者/通讯作者发表多篇SCI/EI收录科研论文。其中申请人是第一作者/通讯作者发表SCI科研论文多篇, 其中电力系统领域顶级刊物 IEEE Transactions on Power Systems 一篇、权威刊物 IEEE Transactions on Industry Applications 一篇。担任 IEEE Transactions on Power Systems、IEEE Transactions on Smart Grids、IEEE Transactions on Industry Applications等国际电气领域核心刊物审稿人。



研究方向: 新能源电力系统优化、电力系统控制、电力系统仿真、电力系统大数据等

教授课程: 电路理论C、电力系统分析等

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近年来主持参与的主要科研项目:

1. 主持, 多模态分量条件下新能源电力系统节点频率分析与优化调度研究, 湖北汽车工业学院博士科研项目;
2. 主持, 考虑电池动态特性的储能充电站系统协调优化方法研究, 湖北省重点实验室开放基金项目;
3. 主持, 基于视觉感知实例分割的汽车座舱监控系统研究, 湖北省重点实验室开放基金项目;
4. 参与, 配电网下的电动车充电站最优选址, 美国壳牌公司 (Shell USA, Inc.) 项目;
5. 参与, 计及电化学信息的微电网储能电池动态特性深度模型, 美国休斯顿大学研究推进基金 (GEAR) 项目;

近年来发表的代表性论文:

- [1] Mingjian Tuo, and Xingpeng Li, "Security-Constrained Unit Commitment Considering Locational Frequency Stability in Low-Inertia Power Grids," IEEE Transactions on Power Systems, vol. 38, no. 5, pp. 4134–4147, Sept 2023. (SCI)
- [2] Mingjian Tuo, and Xingpeng Li, "Machine Learning Assisted Inertia Estimation using Ambient Measurements," IEEE Transactions on Industry Applications, April 2023. (SCI)
- [3] Vasudharini Sridharan, Mingjian Tuo, Xingpeng Li, "Wholesale Electricity Price Forecasting using Integrated Long-term Recurrent Convolutional Network Model" Energies, 2022. (SCI)
- [4] Mingjian Tuo, Jiazi Zhang, Leonardo Rese and Xiaofei Wang, "Developing VSC-HVDC Oscillation Damping Control Constraints in Unit Commitment", IEEE Power and Energy Society General Meeting (PESGM), Jul 2023.
- [5] Mingjian Tuo, Xingpeng Li, and Tianxia Zhao, "Graph Neural Network-based Power Flow Model," in 55th North American Power Symposium (NAPS), Oct. 2023 Asheville, NC, USA.
- [6] Mingjian Tuo, and Xingpeng Li, "Long-term Recurrent Convolutional Networks-based Inertia Estimation using Ambient Measurements". the IEEE Industry Applications Society Annual Meeting, October 2022, Detroit, MI, USA.
- [7] Mingjian Tuo, and Xingpeng Li, "Deep Learning based Security-Constrained Unit Commitment Considering Locational Frequency Stability in Low-Inertia Power Systems", in Proc. 54th North Amer. Power Symp, Salt Lake City, UT, USA, Oct. 2022.
- [8] Mingjian Tuo, and Xingpeng Li, "Optimal Allocation of Virtual Inertia Devices for Enhancing Frequency Stability in Low-Inertia Power Systems", in Proc. 53rd North Amer. Power Symp., Nov. 2021, College Station, TX, USA.
- [9] Mingjian Tuo, "Dynamic Estimation of Power System Inertia Distribution Using Synchrophasor Measurements", in Proc. 52nd North Amer. Power Symp., April. 2021, virtually, Tempe, AZ, USA.
- [10] Mingjian Tuo, Arun Venkatesh Ramesh, Xingpeng Li, "Benefits and Cyber-Vulnerability of Demand Response System in Real-Time Grid Operations", IEEE Smart Grid Comm, Nov. 2020, Tempe, AZ, USA.