

电子与电气工程学院硕士研究生导师信息表

姓 名	胡刚	性 别	男		
出生年月	1975.11	导师类别	☐ 博导	☒ 硕导	
学历/学位	研究生/博士	职 称	副教授		
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研究领域	状态监测与故障诊断、智能信息处理
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基本情况

重庆科技大学电子与电气工程学院电气工程系专任教师，美国威斯康星州立大学密尔沃基分校工程与应用科学学院访问学者。

独立承担本科《工程电磁场》、《电力电子技术》、《供配电系统》等课程教学。近年来主持省部级教改项目1项，校级改项目1项，主研省部级教改项目4项，发表教改论文2篇，主编教材4部，指导学生参加全国大学生电子设计大赛、三菱杯电气自动化大赛、蓝桥杯信息技术大赛等学科竞赛获全国一等奖1项，全国二等奖3项、全国三等奖4项。

近年来主持省部级科研项目/子课题3项，主研国家级科研项目1项，完成横向科研项目多项，授权发明专利2项，发表 SCI/EI 检索论文10余篇。

教学科研成果

1. 科研论文

- [1]. Chen Min-You, **Hu Gang**, He Wei, Yang Yan-Li, Zhai Jin-Qian. A reconstruction method for electrical impedance tomography using particle swarm optimization[C]. Lecture Notes in Computer Science, 2010, 6329 PART 2: 342-350. (EI Accession number: 20104913450144) Corresponding author. (WOS:000286579100038)
- [2]. **Hu Gang**, Chen Min-You, He Wei, Zhai Jin-Qian. Clustering-based particle swarm optimization for electrical impedance imaging[C]. Lecture Notes in Computer Science, 2011, 6728 PART 1: 165-171. (EI Accession number: 20112414057688) Corresponding author. (WOS:000346081500020)
- [3]. Hu Guohui, He Wei, Cheng Shan, **Hu Gang**, Zhao, Yi. Optimal allocation of distributed generation units considering environmental effects[J]. Journal of Information and Computational Science, 2013, 10(11): 3353-3362. (EI Accession number: 20133516678678)
- [4]. Shi Yan, **Hu Gang**, Zhu JiaFu, Chen Yong. The method of calculating polluted insulator's flashover voltage based on ANN[C]. 2014 International Conference on Advances in Materials Science and Information Technologies in Industry, AMSITI 2014, January 11, 2014. Applied

Mechanics and Materials, v 513-517, p 4439-4442, 2014. (EI Accession number: 20141117458509) (WOS:000349668906038)

[5]. Cheng Shan, **Hu Gang**, Qin Tian-Ya. Application of quorum sensing to PSO and MOPSO for convergence promotion[C]. 26th Chinese Control and Decision Conference, CCDC 2014: 1106-1110. (EI Accession number: 20143218039182) Corresponding author. (WOS:000343577701051)

[6]. Cheng Shan, Chen Min-You, **Hu Gang**. Convergence enhanced multi-objective particle swarm optimization with introduction of quorum-sensing inspired turbulence[J]. Lecture Notes in Computer Science, 2014, 8794: 394-403. (EI Accession number: 20150400452083) (Proceedings Paper WOS:000345009700045)

[7]. Wei Zhou, Taifu Li, Yuantao Zhang, Jun Yi, **Gang Hu**. Research on liquid level detection based on acoustic field characteristic of the oil wells[C]. Proceedings of the 2015 10th IEEE Conference on Industrial Electronics and Applications, ICIEA 2015:202-207. (EI Accession number: 20161202121695) (WOS:000377208900038)

[8]. Liu Zhen, Liu WenLi, Su GaoCan, Yang Hejun, **Hu Gang**. Wind-solar micro grid reliability evaluation based on sequential Monte Carlo[C]. 2016 International Conference on Probabilistic Methods Applied to Power Systems, PMAPS 2016 – Proceedings. (EI Accession number: 20171203453749) (WOS:000392327900029)

[9]. Shi Yan, **Hu Gang**, Chen Yong. A flashover voltage forecasting model of a polluted UHV insulator based on an RBF network[C]. International Conference on Advances in Energy and Environment Research, ICAEER 2016: 3-6. (EI Accession number: 20174804461849) (WOS:000432239700001)

[10] Deng Yiping, Liao Lu, Wu Ying, **Hu Gang**, Bai Junjie, Zhai Yuan, Zhu Guang. Self-powered intelligent door handle based on triboelectric nanogenerator[C]. Proceedings of 2017 IEEE 16th International Conference on Cognitive Informatics and Cognitive Computing, ICCI*CC 2017: 465-469. (EI Accession number: 20180304658717) (WOS:000426941300072)

[11]. Yan Shi, **Gang Hu**, Jiafu, Zhu. The Monitoring Interface of Insulator's State Based on the Leakage Characteristics[C]. 7th IEEE International Conference on High Voltage Engineering and Application, ICHVE 2020 - Proceedings, September 6, 2020. (EI Accession number: 20210309784702)

[12]. Chen MY; Zhai JQ, Lang ZQ, Sun F, **Hu G**. A nonlinear frequency analysis based approach for power cable insulation fault detection[J]. COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, 2012, 31(2): 369-386. (WOS:000302384700003)

[13]. Min-You C, **Gang H**, Jin-Qian Z. High Impedance Fault Detection Using Hilbert Transform and Least Square Support Vector Machine for Distribution Feeders[J]. INTERNATIONAL REVIEW OF ELECTRICAL ENGINEERING-IREE, 2012, 7(2): 4013-4020. (WOS:000305259000005)

[14]. Zhai JQ, Chen MY, **Hu G**, Lang ZQ, Huang, Y. Incipient fault classification using a combination of S-transform and Hilbert transform method[J]. INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS, 2013, 23(1): 122-134. (WOS:000318472600010)

[15]. Cao Zhengqin, Wu Xiaoyu, Wei Gang, **Hu Gang**, Yao Qiang, Zhang Haiyan. First-Principles Calculations for Adsorption of HF, COF₂, and CS₂ on Pt-Doped Single-Walled Carbon

Nanotubes[J]. ACS omega, 2021, 6(37): 23776-23781. (DOI:10.1021/acsomega.1c02562)

2. 授权发明专利

[1]. 胡刚, 石亚伟, 陈孟钢, 廖金波. 基于电场感应的变压器绝缘油老化在线检测方法, 201210569497X. 2015.3.4.

[2]. 胡刚, 廖娅, 樊梦. 变电站五防解锁卡管理方法. 2017106205687. 2020.6.12

3. 出版教材

[1]. 刘和平, 谢辉, 胡刚, 周鹏, 《32 位单片机原理及应用》, 北京航空航天大学出版社, Microchip 公司大学计划用书, CIP: 2014004555, 2014. 1, 编著

[2]. 刘和平, 郑群英, 高军礼, 邓力, 胡刚, 《32 位数字信号控制器原理及应用》, 北京航空航天大学出版社, DSC 中国大学计划教材, CIP: 2014248119, 2014. 11

[3]. 刘玉成, 胡刚, 《电路与模拟电子技术》, 中国铁道出版社, 高等学校应用型本科计算机类专业特色规划教材, CIP:2019064655, 2019. 7

科研课题(注明主持或参与, 项目来源, 名称及起止时间):

1. 基于 FPGA 的综合能源系统边缘控制器研制及应用, 教育部科技发展中心, 2021. 6-2022. 5, 主持

2. 智慧能源系统态势感知与智能决策技术应用研究, 重庆市科技局, 2020. 8-2021. 2, 主持

3. 变电站油公司模式适应性改造工程方案, 重庆市天然气净化总厂, 2021. 10-2022. 3, 主持

4. 基于区块链技术的电气产品质量监督系统研究与应用, 重庆市科技局, 2020. 8-2022. 8, 主研

5. 基于大数据的配电网关键设备状态评估方法研究与应用, 重庆市教育委员, 2019. 11-2022. 9, 主研

6. 多能站协调控制与云端监控系统研制及应用, 上海电气集团, 2021. 2-2022. 1, 主研