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黄云辉

发布时间: 2020-02-22

姓名: 黄云辉

性别: 男

邮箱: yellowcloudfly@163.com

微信: 493571725

职称: 副教授, 硕士生导师

研究方向：电力电子化电力系统，风力发电系统并网控制与稳定运行，光伏发电系统并网控制与稳定运行，柔性直流输电及直流电网技术

主讲课程：电力电子在电力系统中的应用，电力电子装置，电力电子化电力系统

教师简介

IEEE会员，担任电机工程学报、IEEE Transactions on Power Electronics、IEEE Journal of Emerging and Selected Topics in Power Electronics, IEEE Transactions on Power Systems、IEEE Transactions on Energy Conversion、IEEE Transactions on Power Delivery等期刊的审稿人，入选2017年扬州市“绿扬金凤计划”。主持国家自然科学基金一项，中央高校专项基金两项，国家重点实验室开放基金一项，军工科技项目一项，国家电网科技项目两项，参与多项国家纵向科技项目。近五年，发表学术论文28篇（EI检索14篇，SCI检索8篇）。其中，所发表论文“Effect of reactive power control on stability of DC-link voltage control in vsc connected to weak grid”入选2014年IEEE电力与能源学会年会最佳论文section。

学习经历

| | | |
|-----------|--------|------|
| 2005-2009 | 武汉理工大学 | 学士 |
| 2009-2015 | 华中科技大学 | 硕博连读 |

工作经历

| | | |
|---------|--------|-----|
| 2015-至今 | 武汉理工大学 | 副教授 |
|---------|--------|-----|

教学科研情况

科研：

[1]国家自然科学基金，51607130，柔性直流输电网络直流电压时间尺度稳定性机理及优化控制研究，2017/01-2019/12，主持；

[2]中央高校基本科研业务费专项资金资助项目，163111006，风电并网多时间尺度稳定性分析与优化控制研究，2016/01-2016/12，主持；

[3]新能源与储能运行控制国家重点实验室开放基金，多电压源型并网变换器直流电压时间尺度稳定机理与优化控制研究，2017/01-2017/12，主持；

[4]国网科技项目，基于多元负荷发展的配电网协调规划研究，2018/07-2019/05，主持；

[5]军工科技项目，XXXX岸电系统稳定性研究，2019/01-2019/12，主持；

[6]先进输电技术国家重点实验室开放基金项目，风电机群接入MMC-HVDC引发次同步振荡的机理研究及交互影响分析，2017/04-2018/04，参与；

[7]工信部科技项目，大型邮轮11kV岸电系统关键技术研究，2018/01-2020/12，正在进行中，参与；

[8]国家重点基础研究发展计划（973计划），2012CB215100，大规模风力发电并网基础科学问题子课题四，2012/01-2016/12，参与；

[9]国家自然科学基金重大项目，51190104，大规模风电接入电力系统运行与控制基础理论研究子课题四，2012/01-2016/12，参与；

[10]国家电网公司科技项目，5211HQ120001，风电并网基础研究平台建设与检测能力提升子课题三，2012/01-2015/12，参与。

论文、专利、著作情况

发表论文：

[1] Yunhui Huang, Xiaoming Yuan, Jiabing Hu*, and Pian Zhou. Modeling of VSC connected to weak grid for stability analysis of DC-link voltage control [J]. Emerging and Selected Topics in Power Electronics, IEEE Journal of, 2015, 3 (4) : 1193-1204. (IEEE期刊论文, SCI检索)

[2] Yunhui Huang, Xiaoming Yuan, Jiabing Hu*, and Pian Zhou. DC-bus voltage control stability affected by AC-bus voltage control in VSCs connected to weak AC grids [J]. Emerging and Selected Topics in Power Electronics, IEEE Journal of, 2016, 4 (2) : 445-458. (IEEE期刊论文, SCI检索)

[3] Yunhui Huang, Dong Wang, Lei Shang*, and Guorong Zhu. Modeling and Stability Analysis of DC-Link Voltage Control in Multi VSCs with Integrated to Weak Grid [J]. IEEE Trans. Energy Conversion, 2017, 32(3): 1127-1138. (IEEE期刊论文, SCI检索)

- [4] Yunhui Huang*, Xuebing Zhai, Jiabing Hu, Dong Liu and Chang Lin. Modeling and Stability Analysis of VSC Internal Voltage in DC-Link Voltage Control Time Scale [J]. Emerging and Selected Topics in Power Electronics, IEEE Journal of, 2018, 6(1): 16-28. (IEEE期刊论文, SCI检索)
- [5] Yunhui Huang*, and Dong Wang. Effect of Control Loops Interactions on Power Stability Limits of VSC Integrated to AC System [J]. IEEE Trans. Power Del., 2018, 33(1): 301-310. (IEEE期刊论文, SCI检索)
- [6] Jiabing Hu*, Yunhui Huang, Dong Wang, Hao Yuan, and Xiaoming Yuan, Modeling of grid-connected DFIG-based wind turbines for DC-link voltage stability analysis [J]. IEEE Trans. Sustain. Energy, 2015, 6 (4) : 1325-1336. (IEEE期刊论文, SCI检索)
- [7] Lei Shang, Jiabing Hu, Xiaoming Yuan, Yunhui Huang, Improved virtual synchronous control for grid-connected VSCs under grid voltage unbalanced conditions [J]. J. Mod. Power Syst. Clean Energy, 2019, 7(1): 174-185. (SCI检索)
- [8] D. Wang, Y. Huang, M. Liao, G. Zhu, and X. Deng, Grid-Synchronization Stability Analysis for Multi DFIGs Connected in Parallel to Weak AC Grids [J]. Energies, 2019, 12(4361): 1-16. (SCI检索)
- [9] Yunhui Huang, Xiaoming Yuan* and Jiabing Hu, Effect of reactive power control on stability of DC-link voltage control in VSC connected to weak grid, 2014 IEEE PES General Meeting, National Harbor, MD, USA, 2014.7.27-7-31. (EI检索)
- [10] P. Zhou, Xiaoming Yuan, Jiabing Hu*, and Yunhui Huang, Stability of DC-link voltage as affected by phase locked loop in VSC when attached to weak grid, in Proc. 2014 IEEE PES General Meeting, Jul. 2014. (EI检索)
- [11] Dong wang, Jiabing Hu* and Yunhui Huang, Stability of DC-link voltage affected by phase-locked loop for DFIG-based wind turbine connected to a weak AC system, presented at the 17th International Conference on Electrical Machines and Systems, Hangzhou, China, 2014. (EI检索)
- [12] 黄云辉*. 弱电网下风机并网变流器直流电压稳定性机理分析与研究[J], 高电压技术, 2017, 43 (9) : 3127-3136. (EI检索)
- [13] 黄云辉*, 周翩, 王龙飞. 弱电网下基于矢量控制的并网变换器功率控制稳定性[J]. 电力系统自动化, 2016, 40(14): 93-99. (EI检索)
- [14] 黄云辉, 宋泽凡, 唐金锐, 熊斌宇, 胡胜. 连接弱电网的并网变换器直流电压时间尺度稳定器的设计与分析[J]. 电工技术学报, 2018, 33(S1): 185-192. (EI检索)

[15] Yunhui Huang*, J. Tang, G. Zhu, X. Li, H. Tang, and Y. Li, Research on DC-link voltage stabiliser for voltage source converter as connected to weak grid [J], The Journal of Engineering (<http://digital-library.theiet.org/content/journals/joe;jsessionid=33dgima93bp58.x-iet-live-01>), 2017, 2017(13): 2168–2172. (EI检索)

[16] Yunhui Huang*, A. Tang, B. Xiong, Y. Huang, H. Tang, and Y. Li, Modeling of Multi VSCs in DC-Link Voltage Control Timescale for Small Signal Stability Analysis [J], The Journal of Engineering (<http://digital-library.theiet.org/content/journals/joe;jsessionid=33dgima93bp58.x-iet-live-01>), 2017, 2017(13): 2057–2061. (EI检索)

[17] Y. Huang, C. Tang, L. Huang, H. Yu, S. Zhang and H. Chen, "Synchronization Control Stability Analysis of Power Converters with High Renewable Energy Penetration," 2019 IEEE Sustainable Power and Energy Conference (iSPEC), Beijing, China, 2019, pp. 1264-1267. (EI检索)

[18] H. Chen, Y. Huang, S. Zhang, H. Yu, C. Tang and L. Huang, "Research on Coordination Planning of Reliability and Economy of Distribution Network with PV Energy Integration," 2019 IEEE Sustainable Power and Energy Conference (iSPEC), Beijing, China, 2019, pp. 1268-1272. (EI检索)

[19] J. Tang, B. Xiong, Y. Huang, C. Yuan and G. Su, "Optimal configuration of energy storage system based on frequency hierarchical control in ship power system with solar photovoltaic plant," in The Journal of Engineering, vol. 2017, no. 13, pp. 1511-1514, 2017. (EI检索)

[20] Zirui Wang, Binyu Xiong, Jinrui Tang, Yang Li, Yunhui Huang, "Multi-parameter Optimization Strategy for Vanadium Redox Flow Battery Operation Based on Genetic Algorithm," 2019 IEEE 10th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), Xi'an, China, 2019, pp. 717-721. (EI检索)

[21] Lei Dai, Bin Ye, Xuli Wang, Chenxu Yin, Feng Zhao, Congwei Jiang, Yunhui Huang, "Research on Optimization of Active Distribution Network Frame with Improved Particle Swarm Optimization Algorithm," 2019 IEEE 2nd International Conference on Electronics Technology (ICET), Chengdu, China, 2019, pp. 487-493. (EI检索)

[22] J. Tang, D. Cai, C. Yuan, Y. Qiu, X. Deng and Y. Huang, "Optimal configuration of battery energy storage systems using for rooftop residential photovoltaic to improve voltage profile of distributed network," in The Journal of Engineering, vol. 2019, no. 16, pp. 728-732, 3 2019. (EI检索)

[23] 喻恒凝, 张思东, 陈后全, 黄力, 唐超, 黄云辉. 分布式光伏与电动汽车接入某市配电网的负荷特性分析与对策[J/OL]. 电测与仪表, 已录取.

[24] 喻恒凝, 黄力, 张思东, 陈后全, 唐超, 黄云辉. 分布式光伏和电动汽车接入对配电网网损和电压偏移影响的分析研究[J]. 智慧电力, 2020, 48(01): 28-34.

[25] 黄力, 喻恒凝, 张思东, 陈后全, 唐超, 黄云辉. 分布式光伏和电动汽车接入对配电网谐波影响的分析[J]. 通信电源技术, 2019, 36(11): 15-18.

[26] 张思东, 陈后全, 唐超, 喻恒凝, 黄力, 黄云辉. 基于改进粒子群算法的主动配电网网架优化研究[J]. 电气应用, 2020, 39(01): 67-73.

[27] 徐瑶台, 黄云辉, 潘小军. 基于抑制短路电流的500kV变压器中性点经小电抗接地的电抗选值研究[J]. 电气应用, 2019, 38(05): 10-15.

[28] 陈强, 黄云辉, 龚跃玲. 新型空间MPPT技术仿真分析及设计[J]. 电气应用, 2018, 37(16): 34-37.

授权发明专利

[1]胡家兵, 黄云辉, 袁小明. 一种用于风力发电系统的直流电压控制单元及方法, 2015.5.26, 中国, CN 103337877A

[2]袁小明, 胡家兵, 谢媛媛, 黄云辉. 一种基于矢量电力系统稳定器的双馈风力发电系统. 申请号: CN 201410437676.7.

[3]黄云辉, 胡家兵, 徐瑶台, 宋泽凡, 迟永宁, 汤海雁, 李琰, 田新首. 一种用于抑制风力发电系统直流电压振荡的稳定器. 专利号: CN 201810115759.2.

[4]胡家兵, 黄云辉, 朱建行, 胡祥楠, 翟雪冰, 寇龙泽, 谷怀广, 闫鹤鸣. 专利名称: 一种用于抑制柔性直流输电系统功率振荡的稳定器. 专利号: CN 201810793966.3

荣誉及获奖情况

[1]2017年扬州市“绿扬金凤计划”优秀博士;

[2]所发表论文“Effect of reactive power control on stability of DC-link voltage control in vsc connected to weak grid”入选2014年IEEE电力与能源学会年会最佳论文section (top10%);

[3]所指导研究生荣获2019年武汉电源学会学术年会二等奖和2019年第二届国际电子技术大会（ICET 2019）最佳报告奖。

其他

毕业生去向：

1. 国家电网公司、地市级供电公司、地市级电科院、电力设计院、发电集团等大型电力国企；
2. 中兴、华为等高科技企业；
3. 金风科技、上海远景、禾望电气等大型新能源设备制造企业；
4. 继续攻读电气工程博士学位。