

导师信息采集表

姓名	任昌亮	性别	男	最高学位	博士
博导/硕导	硕导	邮箱	renchangliang@cigit.ac.cn		
<p>个人简介 (限 300 字) : 任昌亮长期从事量子信息基础理论的相关研究, 已完成论文 40 多篇, 发明专利授权一项, 第一作者或通讯作者 30 余篇, 其中在 Physical Review Applied、Physical Review A、Applied physics letters 等高水平 SCI 杂志发表 20 多篇. 目前先后承担了包括国家重点研发计划子课题国家自然科学基金等国家级和省部级科研项目 8 项, 总计经费 180 余万元。</p>					
<p>教育经历 :</p> <p>2004/09-2009/06, 中国科学技术大学, 物理学院近代物理系, 博士</p> <p>2000/09-2004/06, 河南师范大学, 物理与信息工程学院, 学士</p>					
<p>主要研究方向 :</p> <p>量子光学, 量子信息理论以及量子力学的基本问题。</p> <ol style="list-style-type: none"> 1. 单光子态的探测及相互作用的理论研究 2. 量子非定域性等各种量子关联理论的研究 3. 弱测量理论的实验方案以及其在量子度量中的应用 4. 量子机器学习在量子关联中的应用 5. 各种物理系统下的量子信息方案 					
<p>招生专业 : 光学工程</p>					
<p>科研成果 (含文章、专利、科研项目等) :</p> <ol style="list-style-type: none"> 1. Changliang Ren*, Ya Wang and Jiangfeng Du, Efficient Direct Measurement of Arbitrary Quantum Systems via Weak Measurement, <i>Phys. Rev. Appl.</i> 12, 014045 (2019). 2. Changliang Ren*, Changbo Chen, Steerability detection of an arbitrary two-qubit state via machine learning, <i>Phys. Rev. A</i> 100, 022314 (2019). 3. Zhaoxue Li , Jiangdong Qiu, Linguo Xie , Lan Luo , Xiong Liu, Zhiyou Zhang, 					

- Changliang Ren***, and JingLei Du, Pre- and post-selected measurements with coupling-strength-dependent modulation, *Chin. Phys. B* Vol. 28, No. 3 (2019) 030602 (2019).
4. **Changliang Ren***, Hongyi Su, HaoFei Shi, Jingling Chen, Maximally steerable mixed state based on the linear steering inequality and the Clauser-Horne-Shimony-Holt-like steering inequality, *Phys. Rev. A* 97,032119 (2018).
 5. **Changliang Ren***, HaoFei Shi, Jingling Chen, Ultra-precise time tuning and central frequency shift of optical pulses via small weak values, *Opt. Comm.* 425, 19 (2018).
 6. Changbo Chen, **Changliang Ren***, Xiang-Jun Ye, and Jing-Ling Chen, Mapping criteria between nonlocality and steerability in qudit-qubit systems and between steerability and entanglement in qubit-qudit systems, *Phys. Rev. A* 98, 052114 (2018).
 7. Zhaoxue Li, Jiangdong Qiu, Linguo Xie, Lan Luo, Xiong Liu, Zhiyou Zhang, Changliang Ren*, Jinglei Du, Retaining high precision and sensitivity for an extended range of phase estimation via modulated weak measurement, *Appl. Phys. Lett.* 113(19), 191103 (2018).
 8. Meng Hui Xian, Zhou Jie, Jiang Shu Han, Xu Zhen Peng, **Ren Changliang**, Su HongYi, Chen JingLing, Comparing Bell nonlocality and Einstein-Podolsky-Rosen steering based on the chained inequalities, *Opt. Comm.* 425, 101 (2018).
 9. Huixian Meng, Jie Zhou, **Changliang Ren**, Hongyi Su, Jingling Chen, Chained Einstein-Podolsky-Rosen steering inequalities with improved visibility, *Int. J. Quantum. Inf.*, 16 (4), 1850034 (2018).
 10. Jie Zhou, Huixian Meng, Zhenpeng Xu, Shuhan Jiang, **Changliang Ren**, Hongyi Su, Jingling Chen, Deriving Einstein Podolsky Rosen steering inequalities from the few-body Abner Shimony inequalities, *Mod. Phys. Lett. A* 33, 12 (2018).
 11. Rui-Bo Jin, Guo-Qun Chen, Hui Jing, **Changliang Ren**, Pei Zhao, Ryosuke Shimizu, and Pei-Xiang Lu, Monotonic quantum-to-classical transition enabled by positively correlated biphotons, *Phys. Rev. A* 95, 062341 (2017).
 12. Hong-Yi Su, **Changliang Ren***, Jing-Ling Chen, Fu-Lin Zhang, Chunfeng

- Wu, Zhen-Peng Xu, Mile Gu, Sai Vinjanampathy, and L. C. Kwek, Beating the Clauser-Horne-Shimony-Holt and the Svetlichny games with optimal states, *Phys. Rev. A* 93, 022110 (2016).
13. Jing-Ling Chen, **Changliang Ren***, Changbo Chen, Xiang-Jun Ye, Arun Kumar Pati*, Bell's Nonlocality Can be Detected by the Violation of Einstein-Podolsky-Rosen Steering Inequality, *Sci. Rep.* 6, 39063 (2016).
 14. Jiangdong Qiu, **Changliang Ren***, Precisely measuring the orbital angular momentum of beams via weak measurement, *Phys. Rev. A* 93, 063841 (2016).
 15. **Changliang Ren**, Hongyi Su, Zhen-Peng Xu, Chunfeng Wu, Jingling Chen, Optimal GHZ Paradox for Three Qubits, *Sci. rep.* 5, 13080 (2015).
 16. **Changliang Ren*** and Holger F. Hofmann, Simultaneous suppression of time and energy uncertainties in a single-photon frequency-comb state, *Phys. Rev. A* 89, 053823 (2014).
 17. **Changliang Ren*** and Holger F. Hofmann*, How to make optimal use of maximal multipartite entanglement in clock synchronization, *AIP Conference Proceedings* 81, 1633 (2014).
 18. Holger F. Hofmann and **Changliang Ren***, Proposal for a weak measurement of photon arrival time, *Phys. Rev. A* 87, 062109 (2013).
 19. **Changliang Ren** and Holger F. Hofmann, Analysis of the time-energy entanglement of down conversion photon pairs by correlated single-photon interference, *Phys. Rev. A* 86, 043823 (2012).
 20. **Changliang Ren** and Holger F. Hofmann, Clock synchronization using maximally multipartite entanglement, *Phys. Rev. A* 86, 014301 (2012).
 21. **Changliang Ren** and Holger F. Hofmann, Time-resolved measurement of the quantum states of photons using two-photon interference with short-time reference pulses, *Phys. Rev. A* 84, 032108 (2011).
 22. Koji Nagata, **Changliang Ren**, and Tadao Nakamura, Whether quantum computation can be almighty?, *Adv. Studies Theor. Phys.*, 5, 1 – 14 (2011).
 23. **Changliang Ren** and Mahn soo Choi, Local and nonlocal contents in N -qubit generalized Greenberger-Horne-Zeilinger states, *Phys. Rev. A*, 82, 054102 (2010).

24. Fulin Zhang, **Changliang Ren**, Mingjun Shi, Jingling Chen, Local correlations of mixed two-qubit states, *Phys. Lett. A*, **374**, 2429-2433 (2010).
25. **Changliang Ren**, Dawei Lu, Mingjun Shi, Xinhua Peng, and Jiangfeng Du, Experimentally simulating the violation of Bell-type inequalities for generalized GHZ states, *Phys. Lett. A*, **373**(46), 4222-4226 (2009).
26. Mingjun Shi, **Changliang Ren**, and Jiangfeng Du, Non-homogeneous Bell-type inequalities for two- and three-qubit states, arXiv:0901.3253.
27. Mingjun Shi, **Changliang Ren**, Bo Chong, and Jiangfeng Du, GHZ argument for four-qubit entangled states in presence of white and colored noise, *Phys. Lett. A*, **372**(17), 2980-2983 (2008).
28. **Changliang Ren**, Mingjun Shi, and Jiangfeng Du, Bell theorem without inequality for some generalized GHZ and W states, *Chinese. Phys. Lett*, **24** (11), 3036-3039 (2007).

授权专利

1. 授权发明专利 1项

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个人承诺：本人承诺以上信息真实。如有不实之处，愿承担相应后果。

承诺人签名：