

Publication List

Last updated: May 30, 2022

References

- [1] Jin-Guo Liu, Da Wang, and Qiang-Hua Wang. Quantum impurities in channel mixing baths. *Physical Review B*, 93(3):035102, 2016.
- [2] Yang Yang, Wan-Sheng Wang, Jin-Guo Liu, Hua Chen, Jian-Hui Dai, and Qiang-Hua Wang. Superconductivity in doped Sr_2IrO_4 : A functional renormalization group study. *Physical Review B*, 89(9):094518, 2014.
- [3] Jin-Guo Liu, Zhao-Long Gu, Jian-Xin Li, and Qiang-Hua Wang. Local indistinguishability and edge modes revealed by the sub-system fidelity. *New Journal of Physics*, 19(9):093017, 2017.
- [4] Yao Wang, Jin-Guo Liu, Wan-Sheng Wang, and Qiang-Hua Wang. Electronic order near the type-II van Hove singularity in Bi_2Se_3 . *Physical Review B*, 97(17):174513, 2018.
- [5] Jin-Guo Liu and Lei Wang. Differentiable learning of quantum circuit born machines. *Physical Review A*, 98(6):062324, 2018.
- [6] Zi Cai and Jinguo Liu. Approximating quantum many-body wave functions using artificial neural networks. *Physical Review B*, 97(3):035116, 2018.
- [7] Jinfeng Zeng, Yufeng Wu, Jin-Guo Liu, Lei Wang, and Jiangping Hu. Learning and inference on generative adversarial quantum circuits. *Physical Review A*, 99(5):052306, 2019.
- [8] Jin-Guo Liu, Yi-Hong Zhang, Yuan Wan, and Lei Wang. Variational quantum eigensolver with fewer qubits. *Physical Review Research*, 1(2):023025, 2019.
- [9] Hai-Jun Liao, Jin-Guo Liu, Lei Wang, and Tao Xiang. Differentiable programming tensor networks. *Physical Review X*, 9(3):031041, 2019.
- [10] Xiu-Zhe Luo, Jin-Guo Liu, Pan Zhang, and Lei Wang. Yao.jl: Extensible, efficient framework for quantum algorithm design. *Quantum*, 4:341, 2020.
- [11] Jin-Guo Liu, Liang Mao, Pan Zhang, and Lei Wang. Solving quantum statistical mechanics with variational autoregressive networks and quantum circuits. *Machine Learning: Science and Technology*, 2(2):025011, 2021.
- [12] Hao Xie, Jin-Guo Liu, and Lei Wang. Automatic differentiation of dominant eigensolver and its applications in quantum physics. *Physical Review B*, 101(24):245139, 2020.
- [13] Jin-Guo Liu and Taine Zhao. Differentiate everything with a reversible programming language. *arXiv preprint arXiv:2003.04617*, 2020.
- [14] Jin-Guo Liu, Lei Wang, and Pan Zhang. Tropical tensor network for ground states of spin glasses. *Physical Review Letters*, 126(9):090506, 2021.
- [15] Tong Liu, Jin-Guo Liu, and Heng Fan. Probabilistic nonunitary gate in imaginary time evolution. *Quantum Information Processing*, 20(6):1–21, 2021.
- [16] 王磊 and 刘金国. 微分万物: 深度学习的启示. *物理*, 50(2):69–75, 2021.

- [17] Liu Jin-Guo and Xu Kai-Lai. Automatic differentiation and its applications in physics simulation. *ACTA PHYSICA SINICA*, 70(14), 2021.
- [18] Jin-Guo Liu, Xun Gao, Madelyn Cain, Mikhail D Lukin, and Sheng-Tao Wang. Computing solution space properties of combinatorial optimization problems via generic tensor networks. *arXiv preprint arXiv:2205.03718*, 2022.
- [19] Jinguo Liu, Minh-Thi Nguyen, Shengtao Wang, and Hannes Pichler. Maximum independent sets: From unit disk graphs to arbitrary connectivity.
- [20] Sepehr Ebadi, Alexander Keesling, Madelyn Cain, Tout T Wang, Harry Levine, Dolev Bluvstein, Giulia Semeghini, Ahmed Omran, J-G Liu, Rhine Samajdar, et al. Quantum optimization of maximum independent set using rydberg atom arrays. *Science*, page eabo6587, 2022.