Rui-Zhen Huang

Contact

Address: Rm. 203, Section2, Building A, No.8, 3rd South Street,
Zhongguancun, Haidian District, Beijing, China
Email: huangrzh@icloud.com

Education

2013-2018 **PhD in theoretical physics**
Institute of Physics, Chinese Academy of Sciences Supervisor: Prof. Tao Xiang

2009-2013 **B.S. in physics**
Lanzhou University Supervisor: Prof. Cheng-Long Jia

Professional Experience

2018.07-Present **Postdoctoral Fellow**
Kavli Institute for Theoretical Sciences, University of Chinese Academy of Sciences

Research Interest

1. Tensor network states/Tensor renormalization group methods and their application to quantum many body problems
2. Equilibrium and non-equilibrium properties of novel quantum magnetic phases and transitions between them
3. Topological phases and critical behavior between these phases

Publication

1. Emergent Symmetry and Conserved Current at a One Dimensional Incarnation of Deconfined Quantum Critical Point
RZ Huang, DC Lu, YZ You, ZY Meng, T Xiang, Phys. Rev. B 100, 125137 (2019) (Editors' Suggestion)

2. Nonequilibrium critical dynamics in the quantum chiral clock model
RZ Huang, S Yin, Phys. Rev. B 99,184104(2019)

3. Finite-temperature charge dynamics and the melting of the Mott insulator

XJ Han, C Chen, J Chen, HD Xie, **RZ Huang**, HJ Liao, B Normand, ZY Meng, T Xiang, Phys. Rev. B 99, 245150(2019)

4. Generalized Lanczos method for systematic optimization of tensor network states
RZ Huang, HJ Liao, ZY Liu, HD Xie, ZY Xie, HH Zhao, J Chen, T Xiang, Chinese Physics B 27 (7), 070501(2018)

5. Reorthonormalization of Chebyshev matrix product states for dynamical correlation functions.
HD Xie, **RZ Huang**, XJ Han, X Yan, HH Zhao, ZY Xie, HJ Liao and T Xiang, Phys. Rev. B 97.07 5111 (2018).

6. Analytic continuation with Padé decomposition
XJ Han, HJ Liao, HD Xie, **RZ Huang**, ZY Meng and T Xiang, Chin.Phys. Lett. 34 077102(2017).

7. Optimized contraction scheme for tensor-network states
ZY Xie, HJ Liao, **RZ Huang**, HD Xie, J Chen, ZY Liu and T Xiang. Phys. Rev.B 96, 045128 (2017).

8. Phase transition of the q-state clock model: duality and tensor Renormalization
J Chen, HJ Liao, HD Xie, XJ Han, **RZ Huang**, S Cheng, ZC Wei, ZY Xie and T Xiang. Chin. Phys. Lett. 34 050503(2017).

9. Gapless spin-liquid ground state in the S=1/2 kagome antiferromagnet
HJ Liao, ZY Xie, J Chen, ZY Liu, HD Xie, **RZ Huang**, B Normand and T Xiang. Phys. Rev. Lett. 118, 137202 (2017) (*Editors' Suggestion*) (*Featured in Physics*)