PUBLICATIONS

1. Bo Yang, Na Jiang, Xin Wan, Jie Wang, and Zi-Xiang Hu, Edge Induced Topological Phase Transition of the Quantum Hall state at Half Filling, arXiv:1901.00046, Phys. Rev. B 99, 161108(R) (2019).

2. Zhenyu Li, Mingxing Luo, and Xin Wan, Extracting Critical Exponent by Finite-Size Scaling with Convolutional Neural Networks, arXiv:1711.04252, Phys. Rev. B 99, 075418 (2019).

3. Qiong Zhu, Peng Wu, R. N. Bhatt, and Xin Wan, Localization length exponent in two models of quantum Hall plateau transitions, arXiv:1804.00398, Phys. Rev. B 99, 024205 (2019).

4. Na Jiang and Xin Wan, Recent Progress on the Non-Abelian ν = 5/2 Quantum Hall State, AAPPS Bull. 29 (1), 58 (2019).

5. Wen-Jia Rao, Zhenyu Li, Qiong Zhu, Mingxing Luo, and Xin Wan, Identifying Product Order with Restricted Boltzmann Machines, arXiv:1709.02597, Phys. Rev. B 97, 094207 (2018).

6. Qi Li, Na Jiang, Xin Wan, and Zi-Xiang Hu, Scaling analysis of the quasiparticle tunneling in the Z_k parafermion states, arXiv:1512.06329, J. Phys.: Condens. Matter 30, 255601 (2018).

7. Xin Wan and Kun Yang, Striped quantum Hall state in a half-filled Landau level, arXiv: 1509.01780, Phys. Rev. B 93, 201303(R) (2016).

8. Min Lu, Wenjia Rao, Rajesh Narayanan, Xin Wan, and Guang-Ming Zhang, Emergent infinite-randomness fixed points from the extensive random bipartitions of the spin-1 Affleck-Kennedy-Lieb-Tasaki topological state, arXiv:1502.02095, Phys. Rev. B 94, 214427 (2016).

9. Ming-Chiang Chung, Yi-Hao Jhu, Pochung Chen, Chung-Yu Mou, and Xin Wan, A Memory of Majorana Fermions through Quantum Quench, arXiv:1401.0433, Sci. Rep. 6, 29172 (2016).

10. Wen-Jia Rao, Kang Cai, Xin Wan, and Guang-Ming Zhang, Emergent quantum criticality from fractionalizing one-dimensional SO(5) symmetric valence-bond solid states, Phys. Rev. B 92, 214430 (2015).

11. Qiong Zhu, Xin Wan, Rajesh Narayanan, Jose A. Hoyos, Thomas Vojta, Emerging criticality in the disordered three-color Ashkin-Teller model, arXiv:1504.00408, Phys. Rev. B 91, 224201 (2015).

12. Qiong Zhu, Xin Wan, and Guang-Ming Zhang, Topologically distinct critical theories emerging from the bulk entanglement spectrum of integer quantum Hall states on a lattice, arXiv:1409.4916, Phys. Rev. B 90, 235134 (2014).

13. Wen-Jia Rao, Xin Wan, and Guang-Ming Zhang, Critical entanglement spectrum of one-dimensional symmetry protected topological phases, arXiv:1406.7113, Phys. Rev. B. 90, 075151 (2014).

14. Ki Hoon Lee, Zi-Xiang Hu, and Xin Wan, Construction of the edge states in fractional quantum Hall systems by Jack polynomial, arXiv:1401.4673, Phys. Rev. B 89, 165124 (2014).

15. Rui-Zhi Qiu, Zi-Xiang Hu, and Xin Wan, Single-mode approximation for rotational symmetry broken quantum Hall states, arXiv:1304.2856, Phys. Rev. B 88, 235118 (2013).

16. Xin Wan, Zhenghan Wang, and Kun Yang, From the fractional quantum Hall effect to topological quantum computation (A topical review in Chinese), Physics (Beijing) 42 (8), 04 (2013).

17. Hao Wang, R. Narayanan, Xin Wan, and Fuchun Zhang, Fractional quantum Hall states in two-dimensional electron systems with anisotropic interactions, arXiv:1203.1982, Phys. Rev. B 86, 035122 (2012).

18. Zi-Xiang Hu, Ki Hoon Lee, and Xin Wan, Bulk and edge quasihole tunneling amplitudes in the Laughlin state, arXiv:1201.2105, Int. J. Mod. Phys. Conf. Ser. 11, 70 (2012), presented at Localisation 2011 as an invited talk.

19. Rui-Zhi Qiu, F. D. M. Haldane, Xin Wan, Kun Yang, and Su Yi, Model anisotropic quantum Hall states, arXiv:1201.1983, Phys. Rev. B 85, 115308 (2012) [PRB Editors' Suggestion].

20. Zi-Xiang Hu, R. N. Bhatt, Xin Wan, and Kun Yang, Realizing universal edge properties in graphene fractional quantum Hall liquids, arXiv:1109.5994, Phys. Rev. Lett. 107, 236806 (2011) [PRL Editors' Suggestion].

21. Rui-Zhi Qiu, Su-Peng Kou, Zi-Xiang Hu, Xin Wan, and Su Yi, Quantum Hall Effects in Fast Rotating Fermi Gases with Anisotropic Dipolar Interaction, arXiv:1104.0100, Phys. Rev. A 83, 063633 (2011).

22. Zi-Xiang Hu, Ki Hoon Lee, E. H. Rezayi, Xin Wan, and Kun Yang, Scaling and Non-Abelian Signature in Fractional Quantum Hall Quasiparticle Tunneling Amplitude, arXiv:1011.4716, New J. Phys. 13, 035020 (2011) [Focus on Topological Quantum Computation].

23. Michele Burrello, Giuseppe Mussardo, and Xin Wan, Topological Quantum Gate Construction by Iterative Pseudogroup Hashing, arXiv:1009.5808, New J. Phys. 13, 025023 (2011) [Focus on Topological Quantum Computation].

24. Michele Burrello, Haitan Xu, Giuseppe Mussardo, and Xin Wan, Topological Quantum Hashing with the Icosahedral Group, arXiv:0903.1497, Phys. Rev. Lett. 104, 160502 (2010).

25. Zi-Xiang Hu, E. H. Rezayi, Xin Wan, and Kun Yang, Edge-mode Velocities and Thermal Coherence of Quantum Hall Interferometers, arXiv:0908.3563, Phys. Rev. B 80, 235330 (2009).

26. Hua Chen, Zi-Xiang Hu, Kun Yang, E. H. Rezayi, and Xin Wan, Quasiparticle Tunneling in the Moore-Read Fractional Quantum Hall State, arXiv:0905.3607, Phys. Rev. B 80, 235305 (2009).

27. Haitan Xu and Xin Wan, Exploiting Geometric Degrees of Freedom in Topological Quantum Computing, Phys. Rev. A 80, 012306 (2009).

28. Zi-Xiang Hu, Hua Chen, Kun Yang, E. H. Rezayi, Xin Wan, Ground State and Edge Excitations of Quantum Hall Liquid at Filling Factor 2/3, Phys. Rev. B 78, 235315 (2008).

29. Haitan Xu and Xin Wan, Constructing Functional Braids for Topological Quantum Computing, Phys. Rev. A 78, 042325 (2008).

30. Xin Wan, Zi-Xiang Hu, E. H. Rezayi, and Kun Yang, Fractional Quantum Hall Effect at $\nu = 5/2$: Ground States, Non-Abelian Quasiholes, and Edge Modes in a Microscopic Model, Phys. Rev. B 77, 165316 (2008) [PRB Editors' Suggestion].

31. Zi-Xiang Hu, Xin Wan, and Peter Schmitteckert, Trapping Abelian Anyons in Fractional Quantum Hall Droplets, Phys. Rev. B 77, 075331 (2008).

32. Xin Wan, Kun Yang, and E. H. Rezayi, Edge Excitations and Non-Abelian Statistics in the Moore-Read State: A Numerical Study in the Presence of Coulomb Interaction and Edge Confinement, Phys. Rev. Lett. 97, 256804 (2006).

33. Xin Wan, D. N. Sheng, E. H. Rezayi, Kun Yang, R. N. Bhatt, and F. D. M. Haldane, Mobility Gap in Fractional Quantum Hall Liquids: Effects of Disorder and Layer Thickness, Phys. Rev. B 72, 075325 (2005).

34. Xin Wan, F. Evers, and E. H. Rezayi, Universality of the Edge Tunneling Exponent of Fractional Quantum Hall Liquids, Phys. Rev. Lett. 94, 166804 (2005).

35. R. N. Bhatt, Chenggang Zhou, M. P. Kennett, Mona Berciu, and Xin Wan, Disorder and Frustration in Diluted Magnetic Semiconductors at Low Carrier Densities, Int. J. Mod. Phys. B 19, 5-7 (2005).

36. Qinghong Cui, Xin Wan, and Kun Yang, Numerical Study of Spin Quantum Hall Transitions in Superconductors with Broken Time-Reversal Symmetry, Phys. Rev. B 70, 094506 (2004).

37. Chenggang Zhou, M. P. Kennett, Xin Wan, Mona Berciu, and R. N. Bhatt, Exchange Anisotropy Effects on Ferromagnetism in Diluted, Magnetic Semiconductors, J. Magn. Magn. Mater. 272-276, 2014 (2004).

38. Chenggang Zhou, M. P. Kennett, Xin Wan, Mona Berciu, and R. N. Bhatt, Exchange Anisotropy, Disorder and Frustration in Diluted, Predominantly Ferromagnetic, Heisenberg Spin Systems, Phys. Rev. B 69, 144419 (2004).

39. Xin Wan, E. H. Rezayi, and Kun Yang, Edge Reconstruction in the Fractional Quantum Hall Regime, Phys. Rev. B 68, 125307 (2003).

40. D. N. Sheng, Xin Wan, E. H. Rezayi, Kun Yang, R. N. Bhatt, and F. D. M. Haldane, Disorder-Driven Collapse of the Mobility Gap and Transition to an Insulator in the Fractional Quantum Hall Effect, Phys. Rev. Lett. 90, 256802 (2003).

41. Xin Wan, Kun Yang, Chenggang Zhou, and R.N. Bhatt, Spin Waves in Random Spin Chains, J. Appl. Phys. 93, 7390 (2003).

42. R. N. Bhatt, Mona Berciu, M. P. Kennett, and Xin Wan, Diluted Magnetic Semiconductors in the Low Carrier Density Regime, J. Supercond. 15, 71 (2002).

43. R. N. Bhatt, Xin Wan, M. P. Kennett, and Mona Berciu, Numerical Simulations of Random Spins (and Fermionic) Models with a Wide Distribution of Energy Scales, Comp. Phys. Comm. 147, 684 (2002).

44. Xin Wan, Kun Yang, and R. N. Bhatt, Modified Spin-Wave Study of Random Antiferromagnetic-Ferromagnetic Spin Chains, Phys. Rev. B 66, 014429 (2002).

45. Xin Wan and R. N. Bhatt, Two-Dimensional Wigner Crystal in Anisotropic Semiconductors, Phys. Rev. B 65, 233209 (2002).

46. Xin Wan, Kun Yang, and E. H. Rezayi, Reconstruction of Fractional Quantum Hall Edges, Phys. Rev. Lett. 88, 056802 (2002).

47. R. N. Bhatt and Xin Wan, Mesoscopic Effects in the Quantum Hall Regime, Pramana-J. Phys. 58, 271 (2002).

48. Xin Wan and R. N. Bhatt, Search for Multiple-Step Integer Quantum Hall Transitions, Phys. Rev. B 64, 201313 (2001).

49. R. N. Bhatt and Xin Wan, Monte Carlo Simulations of Doped, Diluted Magnetic Semiconductors - A System with Two Length Scales, Int. J. Mod. Phys. C 10, 1459 (1999).

50. Jian Zi, Xin Wan, Guanghong Wei, Kaiming Zhang, and Xide Xie, Lattice Dynamics of Zinc-Blende GaN and AlN .1. Bulk Phonons, J. Phys.-Condens. Matter 8, 6323 (1996).