Summary of publication:

Total articles: 31

In communications: 2

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Physical Review A: **8**
Physical Review B: **6**
Physical Review E: **1**
New Journal of Physics: **3**
Journal of Physics A: Mathematical and Theoretical: **3**
Reports on Progress in Physics: **1**
Physics Letters A: **2**
Journal of Magnetism and Magnetic Materials: **2**
Europhysics Letters: **1**
Journal of Physics B: Atomic, Molecular and Optical Physics: **1**
Journal of Statistical Mechanics: Theory and Experiment:**1**

Publication details: (in reverse chronological order)

1. Silvia N. Santalla, Giovanni Ramırez, Sudipto Singha Roy, Germán Sierra, Javier Rodrıguez-Laguna, "Entanglement links and the quasiparticle picture",

Journal details: Physical Review B (Letter) **107,** L121114 (2023),

DOI: https://doi.org/10.1103/PhysRevB.107.L121114

Impact factor: 3.908

2. Sudipto Singha Roy, Leon Carl, Philipp Hauke, "Genuine multipartite entanglement in a one-dimensional Bose-Hubbard model with frustrated hopping",

Journal details: Physical Review B **106**, 195158 (2022),

DOI:https://doi.org/10.1103/PhysRevB.106.195158

Impact factor: 3.908

3. Sudipto Singha Roy, Giovanni Ramırez, Silvia N. Santalla, Germán Sierra, Javier Rodrıguez- Laguna, "Exotic correlation spread in free-fermionic states with initial patterns",

Journal details: Physical Review B **105**, 214306 (2022),

DOI:https://doi.org/10.1103/PhysRevB.105.214306

Impact factor: 3.908

4. Sudipto Singha Roy, Anindita Bera, Germán Sierra, "Simulating violation of causality using a topological phase transition",

Journal details: Physical Review A **105**, 032432 (2022),

DOI:https://doi.org/10.1103/PhysRevA.105.032432

Impact factor: 2.971

5. B. C. Hiesmayr, D. McNulty, S. Baek, S. Singha Roy, J. Bae, D. Chruściński, "Detecting Entanglement can be More Effective with Inequivalent Mutually Unbiased Bases",

Journal details: New Journal of Physics **23,** 093018 (2021),

DOI: https://doi.org/10.1088/1367-2630/ac20ea

Impact factor: 3.716

6. Sreetama Das, Sudipto Singha Roy, Samyadeb Bhattacharya, Ujjwal Sen, "Nearly Markovian maps and entanglement-based bound on corresponding non-Markovianity",

Journal details: Journal of Physics A: Mathematical and Theoretical **54**, 395301(2021).

DOI: https://doi.org/10.1088/1751-8121/ac1d8b

Impact factor: 2.132

7. Sudipto Singha Roy, Silvia N. Santalla, Germán Sierra, Javier Rodrıguez-Laguna, "Link representation of the entanglement entropies for all bipartitions",

Journal details: Journal of Physics A: Mathematical and Theoretical **54**, 305301 (2021).

DOI: https://doi.org/10.1088/1751-8121/ac0a30

Impact factor: 2.132

8. Sudipto Singha Roy, Silvia N. Santalla, Javier Rodrıguez-Laguna, Germán Sierra, "Bulk-edge correspondence in the Haldane phase of the bilinear-biquadratic spin-1 Hamiltonian",

Journal details: Journal of Statistical Mechanics: Theory and Experiment 053102 (2021).

DOI: https://doi.org/10.1088/1742-5468/abf7b4

Impact factor: 2. 232

9. Sudipto Singha Roy, Silvia N. Santalla, Javier Rodrıguez-Laguna, Germán Sierra, "Entanglement as geometry and flow",

Journal details: Physical Review B **101**, 195134 (2020),

DOI: https://doi.org/10.1103/PhysRevB.101.195134

Impact factor: 3.908

10. Sudipto Singha Roy, Utkarsh Mishra, Debraj Rakshit, "Trends of information backflow in disordered spin chains",

Journal details: Euro Physics Letters **129**, 30005 (2020),

DOI: https://doi.org/10.1209/0295-5075/129/30005

Impact factor: 1.947

11. Anindita Bera, Sudipto Singha Roy, "Growth of genuine multipartite entanglement in random unitary circuits",

Journal details: Physical Review A **102**, 062431 (2020),

DOI: https://doi.org/10.1103/PhysRevA.102.062431

Impact factor: 2.971

12. Sreetama Das, Chiranjib Mukhopadhyay, Sudipto Singha Roy, Samyadeb Bhattacharya, Aditi Sen De, Ujjwal Sen, "Wave-particle duality employing quantum coherence in superposition with non-orthogonal pointers",

Journal details: Journal of Physics A: Mathematical and Theoretical **53**, 115301(2020),

DOI: https://doi.org/10.1088/1751-8121/ab741f

Impact factor: 2.132

13. Sudipto Singha Roy, Himadri Shekhar Dhar, "Effect of long-range interactions on multipartite entanglement in Heisenberg chains",

Journal details: Physical Review A **99**, 062318 (2019),

DOI: https://doi.org/10.1103/PhysRevA.99.062318

Impact factor: 2.971

14. Sudipto Singha Roy, Himadri Shekhar Dhar, Aditi Sen De, Ujjwal Sen, "Fibonacci sequence and its generalizations in doped quantum spin ladders",

Journal details: Journal of Magnetism and Magnetic Materials **478**, 100 (2019),

DOI: https://doi.org/10.1016/j.jmmm.2019.01.064

Impact factor: 2.993

15. Sudipto Singha Roy, Joonwoo Bae, "Information-Theoretic Meaning of Quantum Information Flow and Its Applications to Amplitude Amplification Algorithms",

Journal details: Physical Review A **100,** 032303 (2019),

DOI: https://doi.org/10.1103/PhysRevA.100.032303

Impact factor: 2.971

16. Sudipto Singha Roy, Himadri Shekhar Dhar, Aditi Sen De, Ujjwal Sen, "Tensor-network approach to compute genuine multisite entanglement in infinite quantum spin chains",

Journal details: Physical Review A **99**, 062305 (2019),

DOI: https://doi.org/10.1103/PhysRevA.99.062305

Impact factor: 2.971

17. Sudipto Singha Roy, Himadri Shekhar Dhar, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Response to defects in multi-and bipartite entanglement of isotropic quantum spin networks",

Journal details: Physical Review. A **97**, 052325 (2018),

DOI: https://doi.org/10.1103/PhysRevA.97.052325

Impact factor: 2.971

18. Anindita Bera, Utkarsh Mishra, Sudipto Singha Roy, Anindya Biswas, Aditi Sen De, Ujjwal Sen, "Benford analysis of quantum critical phenomena: First digit provides high finite-size scaling exponent while first two and further are not much better",

Journal details: Physics Letters A **382**, 1639 (2018),

DOI: https://doi.org/10.1016/j.physleta.2018.04.020

Impact factor: 2.707

19. Sreetama Das, Sudipto Singha Roy, Himadri Shekhar Dhar, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Adiabatic freezing of entanglement with insertion of defects in a one-dimensional Hubbard model",

Journal details: Physical Review B **98**, 125125 (2018),

DOI: https://doi.org/10.1103/PhysRevB.98.125125

Impact factor: 3.908

20. Mahasweta Pandit, Sreetama Das, Sudipto Singha Roy, Himadri Shekhar Dhar, and Ujjwal Sen, "Effects of cavity-cavity interaction on the entanglement dynamics of a generalized double Jaynes- Cummings model",

Journal details: Journal of Physics B: Atomic, Molecular and Optical Physics **51**, 045501 (2018),

DOI: https://doi.org/10.1088/1361-6455/aaa2cf

Impact factor: 1.917

21. Anindita Bera, Tamoghna Das, Debasis Sadhukhan, Sudipto Singha Roy, Aditi Sen De, Ujjwal Sen, "Quantum discord and its allies: a review of recent progress,"

Journal details: Report on Progress in Physics **81**, 024001 (2018),

DOI: https://doi.org/10.1088/1361-6633/aa872f

Impact factor: 17.26

22. Sudipto Singha Roy, Himadri Shekhar Dhar, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Detecting phase boundaries of quantum spin-1/2 XXZ ladder via bipartite and multipartite entanglement transitions",

Journal details: Journal of Magnetism and Magnetic Materials **444**, 227 (2017),

DOI: https://doi.org/10.1016/j.jmmm.2017.07.101

Impact factor: 2.993

23. Sudipto Singha Roy, Himadri Shekhar Dhar, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Analytical recursive method to ascertain multisite entanglement in doped quantum spin ladders",

Journal details: Physical Review B **96** 075143 (2017),

DOI: https://doi.org/10.1103/PhysRevB.96.075143

Impact factor: 3.908

24. Debasis Sadhukhan, Sudipto Singha Roy, Amit Kumar Pal, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Multipartite Entanglement Accumulation in Quantum States: Localizable Generalized Geometric Measure",

Journal details: Physical Review A **95**, 022301 (2017),

DOI:https://doi.org/10.1103/PhysRevA.95.022301

Impact factor: 2.971

25. Asutosh Kumar, Sudipto Singha Roy, Amit Kumar Pal, R Prabhu, Aditi Sen De, Ujjwal Sen , "Conclusive Identification of Quantum Channels via Monogamy of Quantum Correlations",

Journal details: Physics Letters A **380,** 3588 (2016),

DOI: https://doi.org/10.1016/j.physleta.2016.08.039

Impact factor: 2.707

26. Tamoghna Das, Sudipto Singha Roy, Shrobona Bagchi, Avijit Misra, Aditi Sen De, Ujjwal Sen, "Generalized Geometric Measure of Entanglement for Multiparty Mixed States",

Journal details: Physical Review A **94**, 022336 (2016),

DOI: https://doi.org/10.1103/PhysRevA.94.022336

Impact factor: 2.971

27. Debasis Sadhukhan, Sudipto Singha Roy, Debraj Rakshit, R Prabhu, Aditi Sen De, Ujjwal Sen, "Quantum discord length is enhanced while entanglement length is not by introducing disorder in a spin chain",

Journal details: Physical Review E **93**, 012131 (2016),

DOI: https://doi.org/10.1103/PhysRevE.93.012131 **Impact factor: 2.707**

28. Sudipto Singha Roy, Himadri Shekhar Dhar, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Diverging scaling with converging multisite entanglement in odd and even quantum Heisenberg ladders",

Journal details: New Journal of Physics **18**, 023025 (2016),

DOI: https://doi.org/10.1088/1367-2630/18/2/023025 **Impact factor: 3.716**

29. Debasis Sadhukhan, Sudipto Singha Roy, Debraj Rakshit, Aditi Sen De, Ujjwal Sen, "Beating no-go theorems by engineering defects in quantum spin models",

Journal details: New Journal of Physics **17,** 043013 (2015),

DOI: https://doi.org/10.1088/1367-2630/17/4/043013 ,

Impact factor: 3.716

In communication

1. Sudipto Singha Roy, Soumik Bandyopadhyay, Ricardo Costa de Almeida, Philipp Hauke, “Unveiling Eigenstate Thermalization for Non-Hermitian systems”, arXiv:2309.00049 (2023)
2. Soumik Bandyopadhyay, Philipp Hauke, Sudipto Singha Roy, “Quantifying non-Hermiticity using single- and many-particle quantum properties”, arXiv:2406.13517 [quant-ph] (2024).

Conference Proceedings

1 Sudipto Singha Roy, Silvia N. Santalla, Javier Rodríguez-Laguna, Germán Sierra, “Emergent geometry from entanglement structure”, Quantum Theory and Symmetries, Proceedings of the 11th International Symposium, Montreal, Canada, Springer International Publishing, Page 347-357 (2021),

DOI: https://10.1007/978-3-030-55777-5

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