

Tameem Albash

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

3,384
citations

186265

28
h-index

144013

57
g-index

61
all docs

61
docs citations

61
times ranked

1937
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Adiabatic quantum computation. <i>Reviews of Modern Physics</i> , 2018, 90, . | 45.6 | 743 |
| 2 | Experimental signature of programmable quantum annealing. <i>Nature Communications</i> , 2013, 4, 2067. | 12.8 | 223 |
| 3 | Quantum adiabatic Markovian master equations. <i>New Journal of Physics</i> , 2012, 14, 123016. | 2.9 | 202 |
| 4 | Evolution of holographic entanglement entropy after thermal and electromagnetic quenches. <i>New Journal of Physics</i> , 2011, 13, 045017. | 2.9 | 156 |
| 5 | A holographic superconductor in an external magnetic field. <i>Journal of High Energy Physics</i> , 2008, 2008, 121-121. | 4.7 | 140 |
| 6 | Error-corrected quantum annealing with hundreds of qubits. <i>Nature Communications</i> , 2014, 5, 3243. | 12.8 | 139 |
| 7 | Probing for quantum speedup in spin-glass problems with planted solutions. <i>Physical Review A</i> , 2015, 92, . | 2.5 | 117 |
| 8 | Demonstration of a Scaling Advantage for a Quantum Annealer over Simulated Annealing. <i>Physical Review X</i> , 2018, 8, . | 8.9 | 108 |
| 9 | Decoherence in adiabatic quantum computation. <i>Physical Review A</i> , 2015, 91, . | 2.5 | 104 |
| 10 | Consistency tests of classical and quantum models for a quantum annealer. <i>Physical Review A</i> , 2015, 91, . | 2.5 | 97 |
| 11 | Fluctuation theorems for quantum processes. <i>Physical Review E</i> , 2013, 88, 032146. | 2.1 | 95 |
| 12 | Finite temperature large N gauge theory with quarks in an external magnetic field. <i>Journal of High Energy Physics</i> , 2008, 2008, 080-080. | 4.7 | 82 |
| 13 | Holographic studies of entanglement entropy in superconductors. <i>Journal of High Energy Physics</i> , 2012, 2012, 1. | 4.7 | 75 |
| 14 | Quarks in an external electric field in finite temperature large N gauge theory. <i>Journal of High Energy Physics</i> , 2008, 2008, 092-092. | 4.7 | 74 |
| 15 | Quantum annealing correction for random Ising problems. <i>Physical Review A</i> , 2015, 91, . | 2.5 | 74 |
| 16 | Adiabaticity in open quantum systems. <i>Physical Review A</i> , 2016, 93, . | 2.5 | 68 |
| 17 | Quantum annealing correction with minor embedding. <i>Physical Review A</i> , 2015, 92, . | 2.5 | 67 |
| 18 | Vortex and droplet engineering in a holographic superconductor. <i>Physical Review D</i> , 2009, 80, . | 4.7 | 62 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Tunneling and Speedup in Quantum Optimization for Permutation-Symmetric Problems. Physical Review X, 2016, 6, . | 8.9 | 53 |
| 20 | Coarse graining can beat the rotating-wave approximation in quantum Markovian master equations. Physical Review A, 2013, 88, . | 2.5 | 48 |
| 21 | Temperature Scaling Law for Quantum Annealing Optimizers. Physical Review Letters, 2017, 119, 110502. | 7.8 | 44 |
| 22 | Holographic entanglement entropy and renormalization group flow. Journal of High Energy Physics, 2012, 2012, 1. | 4.7 | 39 |
| 23 | Nested quantum annealing correction. Npj Quantum Information, 2016, 2, . | 6.7 | 39 |
| 24 | Role of nonstoquastic catalysts in quantum adiabatic optimization. Physical Review A, 2019, 99, . | 2.5 | 39 |
| 25 | Topology-changing first order phase transition and the dynamics of flavor. Physical Review D, 2008, 77, . | 4.7 | 37 |
| 26 | Finite temperature quantum annealing solving exponentially small gap problem with non-monotonic success probability. Nature Communications, 2018, 9, 2917. | 12.8 | 35 |
| 27 | Quantum-annealing correction at finite temperature: Ferromagnetic $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle p \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -spin models. Physical Review A, 2017, 95, . | 2.5 | 32 |
| 28 | Performance of two different quantum annealing correction codes. Quantum Information Processing, 2016, 15, 609-636. | 2.2 | 30 |
| 29 | Mean Field Analysis of Quantum Annealing Correction. Physical Review Letters, 2016, 116, 220501. | 7.8 | 28 |
| 30 | Reexamination of the evidence for entanglement in a quantum annealer. Physical Review A, 2015, 92, . | 2.5 | 27 |
| 31 | Analog errors in Ising machines. Quantum Science and Technology, 2019, 4, 02LT03. | 5.8 | 27 |
| 32 | Simulated-quantum-annealing comparison between all-to-all connectivity schemes. Physical Review A, 2016, 94, . | 2.5 | 22 |
| 33 | Relaxation versus adiabatic quantum steady-state preparation. Physical Review A, 2017, 95, . | 2.5 | 21 |
| 34 | Limitations of error corrected quantum annealing in improving the performance of Boltzmann machines. Quantum Science and Technology, 2020, 5, 045010. | 5.8 | 19 |
| 35 | Comparing Relaxation Mechanisms in Quantum and Classical Transverse-Field Annealing. Physical Review Applied, 2021, 15, . | 3.8 | 19 |
| 36 | Off-diagonal expansion quantum Monte Carlo. Physical Review E, 2017, 96, 063309. | 2.1 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | De-Signing Hamiltonians for Quantum Adiabatic Optimization. Quantum - the Open Journal for Quantum Science, 0, 4, 334. | 0.0 | 18 |
| 38 | 3-regular three-XORSAT planted solutions benchmark of classical and quantum heuristic optimizers. Quantum Science and Technology, 2022, 7, 025008. | 5.8 | 18 |
| 39 | Global R-currents and phase transitions in large N_c gauge theory. Journal of High Energy Physics, 2008, 2008, 033-033. | 4.7 | 17 |
| 40 | Quantum Hall states in graphene from strain-induced nonuniform magnetic fields. Physical Review B, 2012, 86, . | 3.2 | 17 |
| 41 | Quantum trajectories for time-dependent adiabatic master equations. Physical Review A, 2018, 97, . | 2.5 | 15 |
| 42 | Landau levels, magnetic fields and holographic Fermi liquids. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 345404. | 2.1 | 11 |
| 43 | Exploring More-Coherent Quantum Annealing. , 2018, , . | | 11 |
| 44 | Holographic aspects of Fermi liquids in a background magnetic field. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 345405. | 2.1 | 9 |
| 45 | Analog nature of quantum adiabatic unstructured search. New Journal of Physics, 2019, 21, 113025. | 2.9 | 8 |
| 46 | Sensitivity of quantum speedup by quantum annealing to a noisy oracle. Physical Review A, 2019, 99, . | 2.5 | 7 |
| 47 | High-Quality Thermal Gibbs Sampling with Quantum Annealing Hardware. Physical Review Applied, 2022, 17, . | 3.8 | 7 |
| 48 | Holography, Fractionalization and Magnetic Fields. Lecture Notes in Physics, 2013, , 537-554. | 0.7 | 5 |
| 49 | Localization transition induced by programmable disorder. Physical Review B, 2022, 105, . | 3.2 | 5 |
| 50 | Customized Quantum Annealing Schedules. Physical Review Applied, 2022, 17, . | 3.8 | 5 |
| 51 | Dynamics of fundamental matter in $N = 2^*$ Yang-Mills theory. Journal of High Energy Physics, 2011, 2011, 1. | 4.7 | 4 |
| 52 | Diagonal catalysts in quantum adiabatic optimization. Physical Review A, 2021, 103, . | 2.5 | 4 |
| 53 | Testing a Quantum Annealer as a Quantum Thermal Sampler. ACM Transactions on Quantum Computing, 2021, 2, 1-20. | 4.3 | 4 |
| 54 | Permutation matrix representation quantum Monte Carlo. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 073105. | 2.3 | 4 |

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|----|--|-----|-----------|
| 55 | Thermal dynamics of quarks and mesons \$ \mathcal{N} = \{2^*\} \$ Yang-Mills theory. Journal of High Energy Physics, 2011, 2011, 1. | 4.7 | 2 |
| 56 | Coherent control of non-Markovian photon-resonator dynamics. Physical Review A, 2014, 90, . | 2.5 | 2 |
| 57 | Validating a two-qubit nonstoquastic Hamiltonian in quantum annealing. Physical Review A, 2020, 101, . | 2.5 | 2 |
| 58 | Entanglement entropy of magnetic electron stars. Journal of High Energy Physics, 2015, 2015, 1. | 4.7 | 1 |
| 59 | Solving Quantum Spin Glasses with Off-Diagonal Expansion Quantum Monte Carlo. Journal of Physics: Conference Series, 2018, 1136, 012007. | 0.4 | 0 |
| 60 | Fundamental Limitations to the Scalability of Quantum Annealing Optimizers. Advances in Parallel Computing, 2019, , . | 0.3 | 0 |