

# Travis S Humble

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6916714/publications.pdf>

Version: 2024-02-01

82  
papers

5,933  
citations

257450

24  
h-index

144013

57  
g-index

84  
all docs

84  
docs citations

84  
times ranked

5329  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum supremacy using a programmable superconducting processor. <i>Nature</i> , 2019, 574, 505-510.	27.8	4,148
2	Quantum chemistry as a benchmark for near-term quantum computers. <i>Npj Quantum Information</i> , 2019, 5, .	6.7	138
3	Quantum Annealing for Prime Factorization. <i>Scientific Reports</i> , 2018, 8, 17667.	3.3	98
4	Establishing the quantum supremacy frontier with a 281 Pflop/s simulation. <i>Quantum Science and Technology</i> , 2020, 5, 034003.	5.8	92
5	Quantum computing based hybrid solution strategies for large-scale discrete-continuous optimization problems. <i>Computers and Chemical Engineering</i> , 2020, 132, 106630.	3.8	91
6	Quantum games: a review of the history, current state, and interpretation. <i>Quantum Information Processing</i> , 2018, 17, 1.	2.2	76
7	Superdense Coding over Optical Fiber Links with Complete Bell-State Measurements. <i>Physical Review Letters</i> , 2017, 118, 050501.	7.8	74
8	Application of Quantum Annealing to Nurse Scheduling Problem. <i>Scientific Reports</i> , 2019, 9, 12837.	3.3	72
9	Adiabatic quantum programming: minor embedding with hard faults. <i>Quantum Information Processing</i> , 2014, 13, 709-729.	2.2	69
10	XACC: a system-level software infrastructure for heterogeneous quantum-classical computing. <i>Quantum Science and Technology</i> , 2020, 5, 024002.	5.8	68
11	Directed Atom-by-Atom Assembly of Dopants in Silicon. <i>ACS Nano</i> , 2018, 12, 5873-5879.	14.6	62
12	Quantum Computing Circuits and Devices. <i>IEEE Design and Test</i> , 2019, 36, 69-94.	1.2	42
13	Benchmarking Quantum Annealing Controls with Portfolio Optimization. <i>Physical Review Applied</i> , 2021, 15, .	3.8	42
14	High-Performance Computing with Quantum Processing Units. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2017, 13, 1-13.	2.3	37
15	Spectral effects in quantum teleportation. <i>Physical Review A</i> , 2007, 75, .	2.5	33
16	Quantum Circuit Designs of Integer Division Optimizing T-count and T-depth. <i>IEEE Transactions on Emerging Topics in Computing</i> , 2021, 9, 1045-1056.	4.6	33
17	Wave packet interferometry for short-time electronic energy transfer: Multidimensional optical spectroscopy in the time domain. <i>Journal of Chemical Physics</i> , 2003, 118, 46-61.	3.0	32
18	Optimizing adiabatic quantum program compilation using a graph-theoretic framework. <i>Quantum Information Processing</i> , 2018, 17, 1.	2.2	31

#	ARTICLE	IF	CITATIONS
19	Validating quantum-classical programming models with tensor network simulations. PLoS ONE, 2018, 13, e0206704.	2.5	30
20	Effects of spectral entanglement in polarization-entanglement swapping and type-I fusion gates. Physical Review A, 2008, 77, .	2.5	29
21	Quantum security for the physical layer. , 2013, 51, 56-62.		29
22	Unbiased simulation of near-Clifford quantum circuits. Physical Review A, 2017, 95, .	2.5	29
23	Benchmarking Adaptive Variational Quantum Eigensolvers. Frontiers in Chemistry, 2020, 8, 606863.	3.6	28
24	Simulating the Shastry-Sutherland Ising Model Using Quantum Annealing. PRX Quantum, 2020, 1, .	9.2	27
25	Multi-angle quantum approximate optimization algorithm. Scientific Reports, 2022, 12, 6781.	3.3	27
26	Empirical performance bounds for quantum approximate optimization. Quantum Information Processing, 2021, 20, 1.	2.2	26
27	Nonlinear Wave-Packet Interferometry and Molecular State Reconstruction in a Vibrating and Rotating Diatomic Molecule. Journal of Physical Chemistry B, 2006, 110, 18879-18892.	2.6	25
28	A Review of Machine Learning Classification Using Quantum Annealing for Real-World Applications. SN Computer Science, 2021, 2, 1.	3.6	24
29	Quantum annealing for systems of polynomial equations. Scientific Reports, 2019, 9, 10258.	3.3	23
30	Benchmarking Quantum Chemistry Computations with Variational, Imaginary Time Evolution, and Krylov Space Solver Algorithms. Advanced Quantum Technologies, 2021, 4, 2100012.	3.9	21
31	Lower bounds on circuit depth of the quantum approximate optimization algorithm. Quantum Information Processing, 2021, 20, 1.	2.2	20
32	Tamper-Indicating Quantum Seal. Physical Review Applied, 2016, 5, .	3.8	19
33	Training Restricted Boltzmann Machines With a D-Wave Quantum Annealer. Frontiers in Physics, 2021, 9, .	2.1	19
34	Hybrid Programming for Near-Term Quantum Computing Systems. , 2018, , .		18
35	Training a Quantum Annealing Based Restricted Boltzmann Machine on Cybersecurity Data. IEEE Transactions on Emerging Topics in Computational Intelligence, 2022, 6, 417-428.	4.9	18
36	Quantum Computers for High-Performance Computing. IEEE Micro, 2021, 41, 15-23.	1.8	18

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37	Impact of graph structures for QAOA on MaxCut. Quantum Information Processing, 2021, 20, 1.	2.2	18
38	Adiabatic quantum optimization for associative memory recall. Frontiers in Physics, 2014, 2, .	2.1	16
39	Identifying the minor set cover of dense connected bipartite graphs via random matching edge sets. Quantum Information Processing, 2017, 16, 1.	2.2	16
40	FPGA-based gating and logic for multichannel single photon counting. Journal of Modern Optics, 2012, 59, 1500-1511.	1.3	14
41	Quantum Circuit Designs of Integer Division Optimizing T-Count and T-Depth. , 2017, , .		14
42	Modeling noisy quantum circuits using experimental characterization. Physical Review A, 2021, 103, .	2.5	14
43	Software-defined quantum communication systems. Optical Engineering, 2014, 53, 086103.	1.0	13
44	Spectral and spread-spectral teleportation. Physical Review A, 2010, 81, .	2.5	12
45	Accelerating Scientific Computing in the Post-Moore™s Era. ACM Transactions on Parallel Computing, 2020, 7, 1-31.	1.4	11
46	Quantum Accelerators for High-Performance Computing Systems. , 2017, , .		10
47	Quantum Solvers for Plane-Wave Hamiltonians: Abridging Virtual Spaces Through the Optimization of Pairwise Correlations. Frontiers in Chemistry, 2021, 9, 603019.	3.6	10
48	Benchmarking treewidth as a practical component of tensor network simulations. PLoS ONE, 2018, 13, e0207827.	2.5	9
49	Superdense Coding Interleaved with Forward Error Correction. Quantum Measurements and Quantum Metrology, 2016, 3, .	3.3	8
50	Globally Optimizing QAOA Circuit Depth for Constrained Optimization Problems. Algorithms, 2021, 14, 294.	2.1	8
51	Characterizing the Reproducibility of Noisy Quantum Circuits. Entropy, 2022, 24, 244.	2.2	7
52	Programmable multi-node quantum network design and simulation. Proceedings of SPIE, 2016, , .	0.8	6
53	Benchmarking embedded chain breaking in quantum annealing. Quantum Science and Technology, 0, , .	5.8	6
54	Characterizing the Stability of NISQ Devices. , 2020, , .		6

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55	Prime factorization using quantum variational imaginary time evolution. Scientific Reports, 2021, 11, 20835.	3.3	6
56	Simultaneous teleportation of multiple single-photon degrees of freedom. Journal of Modern Optics, 2011, 58, 288-298.	1.3	5
57	Recall Performance for Content-Addressable Memory Using Adiabatic Quantum Optimization. Entropy, 2017, 19, 500.	2.2	5
58	Particle track classification using quantum associative memory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1010, 165557.	1.6	5
59	Software-defined quantum network switching. , 2018, , .		5
60	A theoretical study of intra-molecular vibrational effects on fractionation factors for molecules containing intra-molecular low-barrier hydrogen bonds. Chemical Physics Letters, 1998, 289, 90-96.	2.6	4
61	Performance Models for Split-Execution Computing Systems. , 2016, , .		4
62	OpenFlow arbitrated programmable network channels for managing quantum metadata. Journal of Defense Modeling and Simulation, 2019, 16, 67-77.	1.7	4
63	A computational workflow for designing silicon donor qubits. Nanotechnology, 2016, 27, 424002.	2.6	3
64	Composable Programming of Hybrid Workflows for Quantum Simulation. , 2021, , .		3
65	Parametrized Hamiltonian simulation using quantum optimal control. Physical Review A, 2021, 104, .	2.5	3
66	Numerical Simulations of Noisy Variational Quantum Eigensolver Ansatz Circuits. , 2021, , .		3
67	Molecular Wavepacket Decomposition by Nonlinear Interferometry. Bulletin of the Chemical Society of Japan, 2002, 75, 1135-1136.	3.2	2
68	Reproducibility in Quantum Computing. , 2021, , .		2
69	Efficient Quantum Gate Discovery with Optimal Control. , 2021, , .		2
70	Scalable Programming Workflows for Validation of Quantum Computers. , 2021, , .		2
71	Multi-FFT Vectorization for the Cell Multicore Processor. , 2010, , .		1
72	Software systems for high-performance quantum computing. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
73	Superdense coding for quantum networking environments. , 2018, , .		1
74	Demonstration of provably secure quantum key distribution (QKD). , 2018, , .		1
75	Implementation/acceleration of vectorized acoustic source localization algorithms on the CELL multi-core processor. , 2010, , .		0
76	Quantum statistical testing of a QRNG algorithm. , 2013, , .		0
77	Software-defined network abstractions and configuration interfaces for building programmable quantum networks. Proceedings of SPIE, 2017, , .	0.8	0
78	Compiling Adiabatic Quantum Programs. , 2018, , .		0
79	IEEE Quantum Week 2020 Workshop Abstracts. , 2020, , .		0
80	Adjunct Spectral Entanglement in Entanglement Swapping and Type-I Fusion. , 2007, , .		0
81	Function Maximization with Dynamic Quantum Search. Lecture Notes in Computer Science, 2019, , 86-95.	1.3	0
82	QuaSiMo: A composable library to program hybrid workflows for quantum simulation. IET Quantum Communication, 0, , .	3.8	0