

No	Title	Author	Affiliation	
1	Efficient simulation of time-dependent Hamiltonians	Guannan Chen	University of Bath	
2	Quantum Computation for Periodic Solids in Second Quantization	Aleksei	Riverlane	https://arxiv.org/abs/2210.02403
3	Avoiding barren plateaus using classical shadows	Stefan Sack	Institute of Science and Technology Austria	https://arxiv.org/abs/2201.08194
4	Quantum simulation of quantum spin liquids	Chukwudubem Umeano	University of Exeter	
5	Graph Neural Network Autoencoders for Efficient Quantum Circuit Optimisation	Alexandru Paler	Aalto University	https://arxiv.org/abs/2303.03280
6	Generalized Belief Propagation Algorithms for Decoding of Surface Codes	Josias Old	Forschungszentrum Jülich, RWTH Aachen university	https://arxiv.org/abs/2212.03214
7	Block-encoding structure matrices for data input in quantum computing	Christoph Sunderhauf	Riverlane	https://arxiv.org/abs/2302.10949
8	Mixed spin-boson hamiltonian and phase transition simulation in cavity electrodynamics on a quantum computer.	Maria Tudorovskaya	Quantinuum	
9	Protocols for classically training quantum generative models on probability distributions	Oleksandr Kyriienko	University of Exeter	https://arxiv.org/abs/2210.13442
10	An adaptive Bayesian quantum algorithm for phase estimation	Joseph Smith	University of Cambridge	https://arxiv.org/abs/2303.01517
11	Optimizing quantum measurements of molecular electronic Hamiltonians	Seonghoon Choi	University of Toronto	https://arxiv.org/abs/2208.06563 ; https://arxiv.org/abs/2208.14490 .
12	The END: An Equivariant Neural Decoder for Quantum Error Correction	Evgenii Egorov	University of Amsterdam	no link yet
13	Minimising failures for the surface code using a color code decoder	Asmae Benhemou	UCL	no link yet
14	Quantum Vision Transformers	Natansh Mathur	QCWare & IRIF, CNRS	
15	Protecting expressive circuits with a Quantum Error Detection Code	Chris Self	Quantinuum	https://arxiv.org/abs/2211.06703
16	Accelerating NISQ Algorithms with Q-Profile: Profiling Tool for Quantum Control Stacks	Koen Mesman	Qblox	https://arxiv.org/abs/2303.01450
17	Good Gottesman-Kitaev-Preskill codes from the NTRU cryptosystem	Jonathan Conrad		
18	Classically Approximating Variational Quantum Machine Learning with Random Fourier Features	Jonas Landman	University of Edinburgh	https://arxiv.org/abs/2210.13200
19	Statistical phase estimation and error mitigation on a superconducting quantum processor	Nick Blunt	Riverlane	
20	Analysis of Quantum Algorithms for Solving Differential Equations	Chelsea Williams	University of Exeter	
21	Linear optical logical Bell state measurements with optimal loss-tolerance threshold.	Paul Hilaire	Quandela	https://arxiv.org/abs/2302.07908
22	Quantum Kernel Methods for Solving Differential Equations	Annie Paine	University of Exeter, Pasqal	https://arxiv.org/abs/2203.08884
23	Multiobjective variational quantum optimization for constrained problems.	Pablo Diez Valle		https://arxiv.org/abs/2302.04196
24	Quantum Natural Language Processing: A Transfer Learning approach	Joseph Tedds	Cambridge Consultants	
25	Properties on Quantum Computers.	Vincent Graves	UCL	
26	Quantum Application Development as a Service	Koen Leijnse		
27	A simple error mitigation strategy for variational quantum algorithms	Felix Rupprecht	German Aerospace Center - Institute for Quantum Technologies	
28	Training variational quantum circuits with CoVaR: covariance root finding with classical shadows	Gregory Boyd	University of Oxford	https://arxiv.org/abs/2204.08494
29	Correcting spanning errors with a fractal code	Georgia Nixon	University of Cambridge	https://arxiv.org/abs/2002.11738
30	Assessment of Hamiltonian partition schemes for the electronic structure problem on a quantum computer using the Trotter approximation in the Schrodinger and Interaction Pictures	Luis Martinez	University of Toronto	
31	Deterministic hierarchical remote state preparation of a two-qubit entangled state using Brown et al. state in a noisy environment	Aakash Warke	Johannes Gutenberg University of Mainz, Germany	https://arxiv.org/abs/2001.00574

32	Sketching phase diagrams using low-depth variational quantum algorithms	Jan Bosse	University of Bristol	https://arxiv.org/abs/2301.09369
33	Observing ground-state properties of the Fermi-Hubbard model using a scalable algorithm on a quantum computer	Stasja Stanisic	Phasecraft	https://arxiv.org/abs/2112.02025
34	Practical expressivity of quantum neural networks	Mohammad Kordzanganeh	Terra Quantum AG	https://arxiv.org/abs/2212.00736 and https://arxiv.org/abs/2303.03227
35	Optimizing fermionic encodings for both Hamiltonian and hardware	Joel Klassen	Phasecraft	https://arxiv.org/abs/2210.05652
36	Towards near-term quantum simulation of materials	Joel Klassen	Phasecraft	https://arxiv.org/abs/2205.15256
37	Quanto: Optimizing Quantum Circuits with Automatic Generation of Circuit Identities	Jessica Pointing	University of Oxford	https://arxiv.org/abs/2111.11387
38	The advantage of quantum control in many-body Hamiltonian learning	Alicja Dutkiewicz		
39	Randomized Benchmarking Using Non-Destructive Readout	Boyko Nikolov	University of Strathclyde	https://arxiv.org/abs/2301.10510
40	Simplifying errors by symmetry and randomisation	James Mills	University of Edinburgh	
41	Reducing the electronic Hamiltonian cost for Quantum Chemistry on Quantum Computers.	Ignacio Loaiza	University of Toronto & Zapata Computing	
42	Graphical CSS Code Transformation and Synthesis	Lia Yeh	University of Oxford and Quantinuum	
43	On the discrete-continuous dichotomy of quantum machine learning	Hannah Helgesen	Linköpings Universitet	
44	Hardware-Tailored Diagonalization Circuits	Daniel Miller	FU Berlin	https://arxiv.org/abs/2203.03646
45	Quantum Krylov Methods with Improved Conditioning	Tom O'Leary	University of Oxford	
46	Speedy Contraction of ZX Diagrams with Triangles via Stabiliser Decompositions	Richie Yeung	University of Oxford	
47	Fault-tolerant one-bit addition with the smallest interesting colour code	Selwyn Simsek	Quantinuum	
48	Computation of Molecular Excited States using Variational Quantum Folded Spectrum	Lila Cadi Tazi	University of Cambridge	
49	Optimizing the information extracted by a single qubit measurement	Stefano Polla	Lorentz institute (Leiden University); Google quantum AI	https://arxiv.org/abs/2207.09479
50	A hybrid quantum algorithm to detect conical intersections	Emiel Koridon	Leiden University and Vrije Universiteit Amsterdam	
51	Out-of-distribution generalization for learning quantum dynamics	Joe Gibbs	University of Surrey	https://doi.org/10.48550/arXiv.2204.10268
52	The Virtual Quantum Device (VQD): A tool for detailed emulation of quantum computers	Cica Gustiani	University of Oxford	
53	Non-unitary Trotter circuits for imaginary time evolution	Chiara Leadbeater	University of Cambridge, Quantinuum	
54	Exploring ab initio machine synthesis of quantum circuits	Richard Meister	University of Oxford	https://arxiv.org/abs/2206.11245
55	Towards improving decoder performance with machine learned open quantum system simulations	Maan Arshpreet	Aalto University	
56	Guaranteed efficient energy estimation of quantum many-body Hamiltonians using Shadow Grouping	Alexander Gresch	Dusseldorf Uni	https://arxiv.org/abs/2301.03385
57	Unifying Quantum Verification and Error-Detection: Theory and Tools for Optimisations"	Dominik Leichtle		https://arxiv.org/abs/2206.00631
58	Quantum Computed Green's Functions using a Cumulant Expansion of the Lanczos Method	Gabriel Greene-Diniz	Quantinuum	
59	Spectral estimation for Hamiltonians: a comparison between classical imaginary-time evolution and quantum real-time evolution	Maarten Stroeks	Delft	
60	Complexity phase transition in Displaced Gaussian Boson Sampling	Zhenghao Li	Imperial College London	
61	High-Fidelity Boson Sampling on an Integrated Photonic Chip	Emlyn Stephens		
62	VQE benchmarking of a multi-reference system	Adam Wesolowski	Lancaster University	
63	Benchmarking simulated and physical quantum processing units using quantum and hybrid algorithms	Wilfrid Somogyi		https://arxiv.org/abs/2211.15631
64	Quantum simulation of thermodynamics in an integrated quantum photonic processor	Nathan Walk		https://arxiv.org/abs/2201.00049v1

65	Speedups for near- and long-term Hamiltonian simulation via fermionic labelling	Mitchell Chiew	University of Cambridge	
66	Efficient quantum algorithms for strongly correlated electrons through spin coupling	Daniel Mart Dafcik	University of Oxford	
67	all this for one qubit? How many terms does divide and quantum actually need?	Simon Marshall		https://arxiv.org/abs/2203.13739
68	Towards scalable decoding of surface codes in hardware	Luka Skoric	Riverlane.	
69	Towards a Star Network Entangler	Jessica Illiano	Nu Quantum	
70	Transition states and greedy exploration of the QAOA optimization landscape	Raimel Alberto Medina Ramos		
71	Multipartite State Distribution for Quantum Networks with Probabilistic Entanglement Generation and Swapping	Evan Sutcliffe	UCL	https://arxiv.org/abs/2303.03334
72	Quantinuum's Quantum Monte Carlo Integration Engine	Ismail Akhalwhya	Quantinuum	
73	Single-qubit gate teleportation provides a quantum advantage	Libor Caha	TU Munich	https://arxiv.org/abs/2209.14158
74	Differential Privacy Amplification in Quantum and Quantum-inspired Algorithms	Armando Angrisani	Quantum Information Center Sorbonne	
75	Optimising graph codes for measurement-based loss tolerance	Tom Bell	University of Bristol	https://arxiv.org/abs/2212.04834
76	A Multigraph Approach for Performing the Quantum Schur Transform	Edward Pearce - Crump	Imperial College London	https://arxiv.org/abs/2204.10694