

A Complete Bibliography of *ACM Transactions on Quantum Computing (TQC)*

Nelson H. F. Beebe
University of Utah
Department of Mathematics, 110 LCB
155 S 1400 E RM 233
Salt Lake City, UT 84112-0090
USA

Tel: +1 801 581 5254
FAX: +1 801 581 4148

E-mail: beebe@math.utah.edu, beebe@acm.org,
beebe@computer.org (Internet)
WWW URL: <https://www.math.utah.edu/~beebe/>

04 September 2024
Version 1.14

Title word cross-reference

+ Z_N [BBCC24]. T [VMPV24].	LJHK24, MT21, MS23, PB22, VHW22]. Algorithms [AHKZ20, BTT22, BT21, LQS ⁺ 23, Ros24, SM22]. Allocation [Kon21]. Analysis [GBOE22]. Annealer [IHA21]. Annealing [MF24, RSB ⁺ 23, RRN ⁺ 23]. Application [DPHW23]. Applications [LCM ⁺ 24]. Approach [BSCSK22, SDL ⁺ 23, SSC21, ZLTY23]. Approximate [AL22, MS22, SLL ⁺ 23]. Approximating [HZK ⁺ 22]. Architecture [ZZC ⁺ 24]. Architectures [PSAF24, UMSN ⁺ 21]. ArQTiC [BDP22]. Assembly [CJAA ⁺ 22]. Assignment [IHKH22, NBGJ23]. Assignment-based [IHKH22]. Authenticity [BKP22]. Automatic [XHB ⁺ 23]. Automating [DPHW23].
-group [BBCC24].	
1 [AMD22, PB22].	
2 [AMdJ23].	
3 [CJAA ⁺ 22].	
Accuracy [AKT24]. ACM [HY21, HY20].	
across [UMSN ⁺ 21]. Addressable	
[ACC ⁺ 23]. Adiabatic [AL22, HTS ⁺ 22].	
Affine [Kon21]. agnostic [CML23].	
Algorithm [AL22, CCH ⁺ 23, JAA ⁺ 22,	

- Backend** [CML23]. **Backend-agnostic** [CML23]. **Based** [AL22, BTT22, LJHK24, LQS⁺23, SDL⁺23, WHB22, GKS24, IHKH22]. **Bayesian** [ZLTY23]. **Beginners** [JAA⁺22]. **Benchmark** [LSKA23]. **Benchmarks** [LCM⁺24]. **Best** [MS22]. **Bilinear** [LQS⁺23]. **Bodies** [CCH⁺23]. **Boolean** [Had21]. **Bridging** [TFH⁺23]. **Broader** [CJAA⁺22], [BTT22, HZK⁺22, WHB22]. **Decoder** [BMM⁺24]. **Decoding** [Hig22, PBP23]. **Decoherence** [SRM⁺23]. **Decomposition** [LJHK24]. **Deeper** [CJAA⁺22]. **Definitions** [ALKP21]. **depth** [HS22]. **Design** [DPHW23]. **Detector** [ZGH24]. **Devices** [GBOE22, LAH21]. **Diagonalizable** [Sha22]. **Diagrams** [HZK⁺22, WHB22]. **Differentiable** [DIB⁺23]. **Digital** [ZZC⁺24]. **Distributed** [CCK⁺23].
- C** [CML23, MNS⁺21]. **Case** [MF24]. **Celebrating** [HY21]. **Centers** [LQS⁺23]. **Challenges** [LSZ24]. **Channels** [FW20]. **Characterization** [RMJ⁺24, XHB⁺23]. **Characterizing** [ZLTY23]. **Chemistry** [CML23]. **Circuit** [BBCC24, CWS⁺21, CSP24, HZK⁺22, IMM⁺22, LJHK24, PB22, PSFA23, PBW23]. **Circuits** [BDG⁺20, DPHW23, GBV⁺21, HS22, NLD⁺23, PBP23, SRM⁺23]. **Classical** [CSP24, FY21, FYS⁺21, MNS⁺21, TFH⁺23, ZZC⁺24, CML23, NM22, Ros24]. **Classification** [UVM24]. **Client** [DKDK21]. **Clifford** [BBCC24, VMPV24]. **Codes** [Hig22]. **Coding** [YN23]. **combination** [GKS24]. **Combinatorial** [UMSN⁺21]. **Communications** [BKP22]. **Compilation** [NM22, PSAF24]. **Compiler** [CCK⁺23]. **Compilers** [PHSM22]. **Compiling** [MS22]. **Completeness** [CJPV21]. **Complexity** [Aar21]. **Computer** [Sha22]. **Computers** [BPD22, ZZC⁺24]. **Computing** [AMD22, AMDJ23, ABIJ23, AL22, CCK⁺23, FYS⁺21, Had21, HTS⁺22, HY21, DIB⁺23, MNS⁺21, NM22, Sha22, SSC21, WHB22, Wu21, HY20]. **Connectivity** [LAH21]. **Connectivity-limited** [LAH21]. **Conscious** [BGL⁺23]. **Constrained** [RRN⁺23]. **Constraints** [DPHW23]. **Convex** [CCH⁺23]. **Cost** [PB22]. **Count** [VMPV24]. **Cutting** [CSP24].
- Data** [BKP22]. **Decision**
- Editorial** [HY20, HY21]. **Effect** [RRN⁺23]. **Efficiency** [PBP23]. **Efficient** [BMM⁺24, FW20, JH22]. **Eigensolver** [HTS⁺22]. **Eigenspectrum** [RRN⁺23]. **Eigenvalues** [Sha22]. **Electronic** [ALKP21]. **Elimination** [GBV⁺21]. **Energy** [PB22]. **Enhancing** [VHW22]. **Equation** [SSC21]. **Error** [BSCSK22, DP20, GBOE22]. **Error-Modeling** [DP20]. **Errors** [ZLTY23]. **Estimating** [CCH⁺23]. **Estimation** [BT21, FW20]. **Evaluation** [LSKA23]. **Exact** [IMM⁺22]. **Exascale** [NLD⁺23]. **Experimental** [DP20]. **Exploiting** [SRM⁺23]. **Expressibility** [CWS⁺21]. **Expression** [ABIJ23]. **Extending** [MNS⁺21, NM22]. **Extrapolation** [VHW22].
- Factors** [RRN⁺23]. **Fair** [GBOE22]. **Faster** [SM22]. **Fault** [BBCC24]. **Fault-tolerant** [BBCC24]. **Features** [FYS⁺21]. **Feedforward** [AHKZ20]. **Finding** [Eke24]. **Formal** [LSZ24, Wu21]. **Framework** [CML23, FYS⁺21]. **Full** [BPD22]. **Full-stack** [BPD22]. **Functions** [Had21].
- Gate** [BGL⁺23, VMPV24, XHB⁺23, ZLTY23]. **Gates** [ACC⁺23]. **Gaussian** [GBV⁺21]. **Gene** [ABIJ23]. **Generative** [RMJ⁺24]. **Geometric** [LQS⁺23]. **gprof** [SSTS23]. **gprof-Inspired** [SSTS23]. **Graph** [LAH21, MS23]. **Graphical** [CJPV21]. **Graphs** [MT21]. **Greedy** [GBV⁺21]. **group**

[BBCC24]. **GWh** [PB22].

Hadamard [VMPV24]. **Hamiltonians** [Car24, Had21, RRN⁺23]. **Hardware** [BGL⁺23]. **Hardware-Conscious** [BGL⁺23]. **Hardy** [DP20]. **Heavy** [BMM⁺24]. **Heterogeneous** [FYS⁺21, MNS⁺21]. **Hexagonal** [BMM⁺24]. **Highway** [MF24]. **Hoare** [FY21]. **Hybrid** [RSB⁺23, Ros24].

i-QER [BSCSK22]. **Identification** [DKDK21]. **Impact** [Kon21]. **Implementation** [BBCC24]. **Implementations** [JAA⁺22]. **Improved** [BDG⁺20]. **Improving** [HTS⁺22, PBP23]. **Inaugural** [HY20]. **Incremental** [SDL⁺23]. **Information** [PBP23]. **Initial** [ZGH24]. **initialized** [TFH⁺23]. **Inspired** [SSTS23, SM22]. **Integer** [NBGJ23]. **Integrity** [BKP22]. **Intelligent** [BSCSK22]. **Interior** [KP20]. **Intermediate** [BDG⁺20]. **Interpolation** [LQS⁺23]. **Introduction** [AMD22, AMdJ23, Wu21]. **Isomorphism** [MS23]. **Issue** [AMD22, AMdJ23, HY20, Wu21].

Just [NM22]. **Just-in-time** [NM22].

Knowledge [MT21].

Language [CJAA⁺22]. **Languages** [CJPV21, Wu21]. **Larger** [RSB⁺23]. **Larger-than-QPU** [RSB⁺23]. **Lattice** [RSB⁺23]. **Lattice-structured** [RSB⁺23]. **Layouts** [PSFA23]. **LEAP** [SDL⁺23]. **Learning** [BMM⁺24, Car24, CWS⁺21, MT21, PSFA23, PHSM22, UVM24]. **Level** [LSKA23]. **Leveraging** [JH22]. **limited** [LAH21]. **Linear** [AL22, GBV⁺21, GKS24, SM22, VHW22]. **Linear-combination-of-unitaries-based** [GKS24]. **linearity** [BT21]. **Logic** [FY21, HS22, LJHK24, Wu21]. **Loop**

[Kon21]. **Low** [LSKA23]. **Low-Level** [LSKA23]. **Lowering** [HS22]. **LPs** [KP20].

Machine

[BMM⁺24, MT21, NLD⁺23, PSFA23]. **Map** [LAH21]. **Mapping** [PBW23]. **Matching** [Hig22, IMM⁺22]. **Materials** [BPD22]. **Matrices** [Sha22]. **Matrix** [Car24]. **MaxCut** [SLL⁺23]. **Measurement** [UVM24, ZLTY23]. **Mechanics** [CJPV21]. **Meta** [DPHW23]. **Method** [KP20]. **Methods** [GBV⁺21, Wu21]. **Milestones** [MF24]. **Minimum** [Hig22]. **Minimum-Weight** [Hig22]. **Mitigate** [SRM⁺23]. **Mitigating** [ZLTY23]. **Mixed** [CJPV21]. **Modeling** [DP20]. **Models** [RMJ⁺24]. **MQCC** [DPHW23]. **Multilevel** [UMSN⁺21].

Network [HS22, NLD⁺23]. **Networking** [BKP22]. **Networks** [AHKZ20, ZGH24]. **Neural** [AHKZ20]. **NISQ** [DPHW23, FYS⁺21, GBOE22, LSKA23]. **Non** [BT21]. **Non-linearity** [BT21]. **Numerical** [SDL⁺23].

onto [LAH21]. **Open** [Aar21].

OpenQASM [CJAA⁺22]. **Optimal** [AKT24, GKS24, NBGJ23, PBW23, VMPV24, AL22, BTT22]. **Optimisation** [PB22]. **Optimising** [PB22]. **Optimization** [AL22, BGL⁺23, HS22, IMM⁺22, IHKH22, LCM⁺24, PSFA23, SLL⁺23, SDL⁺23, UMSN⁺21, XHB⁺23]. **Optimized** [CCK⁺23]. **Optimizing** [ZGH24]. **Order** [Eke24]. **Overfitting** [CWS⁺21].

Package [BPD22, Hig22]. **Paradox** [DP20].

Parameter [SLL⁺23]. **Part** [AMD22, AMdJ23]. **Pattern** [IMM⁺22]. **Pauli** [Car24, FW20, VMPV24]. **Penalty** [RRN⁺23]. **Perfect** [Hig22]. **Perform** [PHSM22]. **Performance** [LCM⁺24]. **Point** [KP20]. **Practical** [IMM⁺22, SSC21].

Predicting [PB22]. **Probabilistic** [AKT24].
Probability [Eke24]. **Problem** [MS23].
Problems [Aar21, MS22, RSB⁺23].
Processes [Car24]. **Profiler** [SSTS23].
Program [IHKH22]. **Programming**
[ABIJ23, FYS⁺21, NBGJ23, Wu21].
Programs [LSZ24]. **Protection** [BKP22].
Protocols [DKDK21]. **PUF** [DKDK21].
PyMatching [Hig22]. **Python**
[Hig22, NM22].

QAOA [TFH⁺23]. **QASMBench**
[LSKA23]. **QECC** [BMM⁺24]. **QER**
[BSCSK22]. **QIRO** [IHKH22]. **qprof**
[SSTS23]. **QPU** [RSB⁺23]. **Quantum**
[Aar21, AMD22, AMdJ23, AHKZ20, ABIJ23,
AL22, ALKP21, ACC⁺23, BDG⁺20, BKP22,
BPD22, BSCSK22, BTT22, BT21, BBCC24,
BGL⁺23, CJPV21, Car24, CCH⁺23,
CWS⁺21, CSP24, CML23, CJAA⁺22,
CCK⁺23, DPHW23, DKDK21, Eke24, FY21,
FYS⁺21, GKS24, Had21, HS22, HTS⁺22,
Hig22, HZK⁺22, HY20, HY21, IMM⁺22,
IHKH22, IHA21, JAA⁺22, JH22, KP20,
LSZ24, LQS⁺23, LSKA23, MT21, MS22,
MS23, DIB⁺23, MF24, MNS⁺21, NM22,
NLD⁺23, PB22, PSFA23, PBW23, PBP23,
PHSM22, RSB⁺23, RMJ⁺24, RRN⁺23,
Ros24, Sha22, SM22, SLL⁺23, SRM⁺23,
SSC21, SSTS23, TFH⁺23, UMSN⁺21,
UVM24, VHW22, WHB22, Wu21, ZGH24,
ZZC⁺24]. **Quantum-Classical**
[FYS⁺21, CML23, NM22, Ros24].
Quantum-inspired [SM22]. **QubiC**
[XHB⁺23]. **Qubit** [Kon21, NBGJ23,
PSAF24, PHSM22, XHB⁺23]. **Qubits**
[DP20, LAH21]. **Query** [Aar21, BTT22].
Query-optimal [BTT22]. **Quingo**
[FYS⁺21]. **Qutrits** [BDG⁺20].

Randomised [BT21]. **Real** [Had21].
Reduction [BSCSK22]. **Reinforcement**
[PHSM22]. **Related** [Aar21]. **Replay**
[BKP22]. **Representation**

[Had21, IHKH22]. **Reversible**
[GBV⁺21, LJHK24]. **Richardson** [VHW22].
Rigidity [YN23]. **Rotations** [VMPV24].
Routing [NBGJ23, PHSM22].

Sampler [IHA21]. **Sampling** [GBOE22].
Scalable [PSAF24]. **Scaling** [SDL⁺23].
SDP [TFH⁺23]. **SDPs** [KP20]. **Search**
[Ros24]. **Security** [ALKP21]. **Sensor**
[ZGH24]. **Sensors** [ZGH24]. **Sequences**
[VMPV24]. **server** [DKDK21]. **Set** [PBP23].
Shadows [CSP24]. **Shor** [PB22].
Simulating [BPD22, NLD⁺23]. **Simulation**
[HZK⁺22, LSKA23]. **Simulations**
[CML23, JH22]. **Single** [IHKH22]. **Slack**
[SRM⁺23]. **Software**
[AMD22, AMdJ23, BPD22]. **Solver**
[AL22, GKS24]. **Solving** [SM22, SSC21].
Sparsity [JH22]. **Special**
[AMD22, AMdJ23, Wu21]. **Spectral**
[LAH21]. **Spin** [PSAF24]. **Spin-Qubit**
[PSAF24]. **SpinQ** [PSAF24]. **stack**
[BPD22]. **starts** [TFH⁺23]. **State**
[CJPV21, JH22, ZGH24]. **Static** [IHKH22].
Statistical [UVM24]. **Strategies** [PSAF24].
structured [RSB⁺23]. **Study** [MF24]. **Sub**
[MS23]. **Sub-graph** [MS23].
Subarchitectures [PBW23]. **Success**
[Eke24]. **Suite** [LSKA23].
Superconducting [DP20]. **Superdense**
[YN23]. **Syndrome** [BMM⁺24]. **Synthesis**
[AKT24, BBCC24, GBV⁺21, LJHK24,
SDL⁺23, VMPV24]. **System**
[AL22, GKS24]. **Systems** [SM22, VHW22].

T [HS22]. **T-depth** [HS22]. **Techniques**
[BBCC24, Wu21]. **Tensor**
[LJHK24, NLD⁺23]. **Testing** [IHA21].
Theory [LSZ24, LAH21]. **Thermal**
[IHA21]. **Time** [AL22, BTT22, NM22].
Time- [BTT22]. **Time-optimal** [AL22].
TimeStitch [SRM⁺23]. **Toffoli** [BGL⁺23].
tolerant [BBCC24]. **Tools**
[AMD22, AMdJ23, LSZ24, WHB22].

Transactions [HY20]. **Transfer** [Car24, SLL⁺23]. **Transformations** [Kon21]. **Transforms** [DIB⁺23]. **Trees** [BTT22].

unitaries [GKS24]. **Unitary** [AKT24]. **Uses** [PB22]. **Using** [HTS⁺22, LAH21, PHSM22, SDL⁺23, SSC21, UVM24, VHW22, BBCC24]. **Utility** [MF24].

Variables [FY21]. **Variational** [HTS⁺22]. **Verification** [DP20, LSZ24]. **versus** [GBV⁺21]. **via** [BDG⁺20, BMM⁺24, Car24, HS22, NBGJ23, NM22]. **Virtual** [NLD⁺23]. **Volumes** [CCH⁺23]. **Voting** [ALKP21].

warm [TFH⁺23]. **warm-starts** [TFH⁺23]. **Wave** [SSC21]. **Weight** [Hig22]. **Weighted** [SLL⁺23].

[ACC⁺23]

CODEN ????, ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3617691>.

Arrighi:2023:AQG

Pablo Arrighi, Christopher Cedzich, Marin Costes, Ulysse Rémond, and Benoît Valiron. Addressable quantum gates. *ACM Transactions on Quantum Computing (TQC)*, 4(3):18:1–18:??, September 2023. CODEN ????, ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3581760>.

Allcock:2020:QAF

[AHKZ20]

Jonathan Allcock, Chang-Yu Hsieh, Iordanis Kerenidis, and Shengyu Zhang. Quantum algorithms for feedforward neural networks. *ACM Transactions on Quantum Computing (TQC)*, 1(1):6:1–6:24, December 2020. CODEN ????, ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3411466>.

Akibue:2024:PUS

[AKT24]

Seiseki Akibue, Go Kato, and Seiichiro Tani. Probabilistic unitary synthesis with optimal accuracy. *ACM Transactions on Quantum Computing (TQC)*, 5(3):17:1–17:??, September 2024. CODEN ????, ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3663576>.

References

Aaronson:2021:OPR

[Aar21] Scott Aaronson. Open problems related to quantum query complexity. *ACM Transactions on Quantum Computing (TQC)*, 2(4):14:1–14:9, December 2021. CODEN ????, ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3488559>.

Alvarez:2023:GEP

[ABIJ23] Gonzalo Alvarez, Ryan Bennink, Stephan Irle, and Jacek Jakowski. Gene expression programming for quantum computing. *ACM Transactions on Quantum Computing (TQC)*, 4(4):27:1–27:??, December 2023.

- An:2022:QLS**
- [AL22] Dong An and Lin Lin. Quantum linear system solver based on time-optimal adiabatic quantum computing and quantum approximate optimization algorithm. *ACM Transactions on Quantum Computing (TQC)*, 3(2):5:1–5:28, June 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3498331>.
- Arapinis:2021:DSQ**
- [ALKP21] Myrto Arapinis, Nikolaos Lamproprou, Elham Kashefi, and Anna Pappa. Definitions and security of quantum electronic voting. *ACM Transactions on Quantum Computing (TQC)*, 2(1):4:1–4:33, April 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3450144>.
- Alexeev:2022:ISI**
- [AMD22] Yuri Alexeev, Alex McCaskey, and Wibe De Jong. Introduction to the special issue on software tools for quantum computing: Part 1. *ACM Transactions on Quantum Computing (TQC)*, 3(3):11:1–11:3, September 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3532179>.
- Alexeev:2023:ISI**
- [AMdJ23] Yuri Alexeev, Alex McCaskey, and Wibe de Jong. Introduction to the special issue on software tools for quantum computing: Part 2. *ACM Transactions on Quantum Computing (TQC)*, 4(1):1:1–1:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3574160>.
- Biswal:2024:STF**
- [BBCC24] Laxmidhar Biswal, Debjyoti Bhattacharjee, Amlan Chakrabarti, and Anupam Chattopadhyay. Synthesis techniques for fault-tolerant quantum circuit implementation using Clifford + Z_{N^k} -group. *ACM Transactions on Quantum Computing (TQC)*, 5(3):16:1–16:??, September 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3673240>.
- Baker:2020:IQC**
- [BDG⁺20] Jonathan M. Baker, Casey Duckering, Pranav Gokhale, Natalie C. Brown, Kenneth R. Brown, and Frederic T. Chong. Improved quantum circuits via intermediate qutrits. *ACM Transactions on Quantum Computing (TQC)*, 1(1):2:1–2:25, December 2020. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3406309>.
- Bowman:2023:HCO**
- [BGL⁺23] Max Aksel Bowman, Pranav Gokhale, Jeffrey Larson, Ji Liu,

- and Martin Suchara. Hardware-conscious optimization of the quantum Toffoli gate. *ACM Transactions on Quantum Computing (TQC)*, 4(4):26:1–26:??, December 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3609229>.
- Barbeau:2022:AIR**
- [BKP22] Michel Barbeau, Evangelos Kranakis, and Nicolas Perez. Authenticity, integrity, and replay protection in quantum data communications and networking. *ACM Transactions on Quantum Computing (TQC)*, 3(2):9:1–9:22, June 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3517341>.
- Bhoumik:2024:ESD**
- [BMM⁺24] Debasmita Bhoumik, Ritajit Majumdar, Dhiraj Madan, Dhinakaran Vinayagamurthy, Shesha Raghunathan, and Susmita Sur-Kolay. Efficient syndrome decoder for heavy hexagonal QECC via machine learning. *ACM Transactions on Quantum Computing (TQC)*, 5(1):5:1–5:??, March 2024. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3636516>.
- Bassman:2022:AFS**
- [BPD22] Lindsay Bassman, Connor Powers, and Wibe A. De Jong.
- [BSCSK22] Saikat Basu, Amit Saha, Amlan Chakrabarti, and Susmita Sur-Kolay. i-QER: an intelligent approach towards quantum error reduction. *ACM Transactions on Quantum Computing (TQC)*, 3(4):23:1–23:18, December 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3539613>.
- Basu:2022:QIA**
- [BT21] Debajyoti Bera and Sapv Tharmashastha. Quantum and randomised algorithms for non-linearity estimation. *ACM Transactions on Quantum Computing (TQC)*, 2(2):5:1–5:27, July 2021. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3456509>.
- Bera:2021:QRA**
- [BTT22] Salman Beigi, Leila Taghavi, and Artin Tajdini. Time- and query-optimal quantum algorithms based on decision trees. *ACM Transactions on Quantum Computing (TQC)*, 3(4):
- Beigi:2022:TQO**

- 19:1–19:31, December 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3519269>.
- Caro:2024:LQP**
- [Car24] Matthias C. Caro. Learning quantum processes and Hamiltonians via the Pauli transfer matrix. *ACM Transactions on Quantum Computing (TQC)*, 5(2):14:1–14:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3670418>.
- Chakrabarti:2023:QAE**
- [CCH⁺23] Shouvanik Chakrabarti, Andrew M. Childs, Shih-Han Hung, Tongyang Li, Chunhao Wang, and Xiaodi Wu. Quantum algorithm for estimating volumes of convex bodies. *ACM Transactions on Quantum Computing (TQC)*, 4(3):20:1–20:??, September 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3588579>.
- Cuomo:2023:OCD**
- [CCK⁺23] Daniele Cuomo, Marcello Calleffi, Kevin Krsulich, Filippo Tramonto, Gabriele Agliardi, Enrico Prati, and Angela Sara Cacciapuoti. Optimized compiler for distributed quantum computing. *ACM Transactions on Quantum Computing (TQC)*, 4(2):15:1–15:??, June 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3579367>.
- Cross:2022:OBD**
- [CJAA⁺22] Andrew Cross, Ali Javadi-Abhari, Thomas Alexander, Niel De Beaudrap, Lev S. Bishop, Steven Heidel, Colm A. Ryan, Prasahnt Sivarajah, John Smolin, Jay M. Gambetta, and Blake R. Johnson. OpenQASM 3: a broader and deeper quantum assembly language. *ACM Transactions on Quantum Computing (TQC)*, 3(3):12:1–12:50, September 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3505636>.
- Carette:2021:CGL**
- [CJPV21] Titouan Carette, Emmanuel Jeandel, Simon Perdrix, and Renaud Vilmart. Completeness of graphical languages for mixed state quantum mechanics. *ACM Transactions on Quantum Computing (TQC)*, 2(4):17:1–17:28, December 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3464693>.
- Claudino:2023:BAQ**
- [CML23] Daniel Claudino, Alexander J. McCaskey, and Dmitry I. Lyakh. A backend-agnostic, quantum-classical framework for simulations of chemistry in C++.

- ACM Transactions on Quantum Computing (TQC)*, 4(1):2:1–2:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3523285>.
- Chen:2024:QCC**
- [CSP24] Daniel Tzu Shuan Chen, Zain Hamid, Saleem, and Michael Alexandrovich Perlin. Quantum circuit cutting for classical shadows. *ACM Transactions on Quantum Computing (TQC)*, 5(2):13:1–13:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3665335>.
- Chen:2021:EOQ**
- [CWS⁺21] Chih-Chieh Chen, Masaya Watabe, Kodai Shiba, Masaru Sogabe, Katsuyoshi Sakamoto, and Tomohiro Sogabe. On the expressibility and overfitting of quantum circuit learning. *ACM Transactions on Quantum Computing (TQC)*, 2(2):8:1–8:24, July 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3466797>.
- Matteo:2023:QCD**
- [DIB⁺23] Olivia Di Matteo, Josh Izaac, Thomas R. Bromley, Anthony Hayes, Christina Lee, Maria Schuld, Antal Száva, Chase Roberts, and Nathan Killoran. Quantum computing with differentiable quantum transforms.
- ACM Transactions on Quantum Computing (TQC)*, 4(3):22:1–22:??, September 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3592622>.
- Doosti:2021:CSI**
- Mina Doosti, Niraj Kumar, Mahshid Delavar, and Elham Kashefi. Client-server identification protocols with quantum PUF. *ACM Transactions on Quantum Computing (TQC)*, 2(3):12:1–12:40, September 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3484197>.
- Das:2020:NEM**
- Soumya Das and Goutam Paul. A new error-modeling of Hardy’s Paradox for superconducting qubits and its experimental verification. *ACM Transactions on Quantum Computing (TQC)*, 1(1):4:1–4:24, December 2020. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3396239>.
- Deng:2023:ANA**
- [DPHW23] Haowei Deng, Yuxiang Peng, Michael Hicks, and Xiaodi Wu. Automating NISQ application design with Meta Quantum Circuits with Constraints (MQCC). *ACM Transactions on Quantum Computing (TQC)*, 4(3):16:1–16:??, September 2023. CO-

- DEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3579369>.
- Ekeraa:2024:SPQ**
- [Eke24] Martin Ekerå. On the success probability of quantum order finding. *ACM Transactions on Quantum Computing (TQC)*, 5(2):11:1–11:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3655026>.
- Flammia:2020:EEP**
- [FW20] Steven T. Flammia and Joel J. Wallman. Efficient estimation of Pauli channels. *ACM Transactions on Quantum Computing (TQC)*, 1(1):3:1–3:32, December 2020. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3408039>.
- Feng:2021:QHL**
- [FY21] Yuan Feng and Mingsheng Ying. Quantum Hoare logic with classical variables. *ACM Transactions on Quantum Computing (TQC)*, 2(4):16:1–16:43, December 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3456877>.
- Fu:2021:QPF**
- [FYS⁺21] X. Fu, Jintao Yu, Xing Su, Hanru Jiang, Hua Wu, Fucheng Cheng, Xi Deng, Jinrong Zhang, Lei Jin, Yihang Yang, Le Xu, Chun-chao Hu, Anqi Huang, Guangyao Huang, Xiaogang Qiang, Ming-tang Deng, Ping Xu, Weixia Xu, Wanwei Liu, Yu Zhang, Yuxin Deng, Junjie Wu, and Yuan Feng. Quingo: a programming framework for heterogeneous quantum-classical computing with NISQ features. *ACM Transactions on Quantum Computing (TQC)*, 2(4):19:1–19:37, December 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3483528>.
- Golden:2022:FSE**
- [GBOE22] John Golden, Andreas Bärtschi, Daniel O’Malley, and Stephan Eidenbenz. Fair sampling error analysis on NISQ devices. *ACM Transactions on Quantum Computing (TQC)*, 3(2):8:1–8:23, June 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3510857>.
- GoubaultDeBrugiere:2021:GEV**
- [GBV⁺21] Timothée Goubault De Brugièr, Marc Baboulin, Benoît Valiron, Simon Martiel, and Cyril Allouche. Gaussian elimination versus greedy methods for the synthesis of linear reversible circuits. *ACM Transactions on Quantum Computing (TQC)*, 2(3):11:1–11:26, September 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic).

- tronic). URL <https://dl.acm.org/doi/10.1145/3474226>.
- [GKS24] Sander Gribling, Iordanis Kerenidis, and Dániel Szilágyi. An optimal linear-combination-of-unitaries-based quantum linear system solver. *ACM Transactions on Quantum Computing (TQC)*, 5(2):9:1–9:??, June 2024. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3649320>.
- [Had21] Stuart Hadfield. On the representation of Boolean and real functions as Hamiltonians for quantum computing. *ACM Transactions on Quantum Computing (TQC)*, 2(4):18:1–18:21, December 2021. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3478519>.
- [Hig22] Oscar Higgott. PyMatching: a Python package for decoding quantum codes with minimum-weight perfect matching. *ACM Transactions on Quantum Computing (TQC)*, 3(3):16:1–16:16, September 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3505637>.
- [HS22] Thomas Häner and Mathias Soeken. Lowering the T-depth of quantum circuits via logic network optimization. *ACM Transactions on Quantum Computing (TQC)*, 3(2):6:1–6:15, June 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3501334>.
- [HTS⁺22] Stuart M. Harwood, Dimitar Trenev, Spencer T. Stober, Panagiotis Barkoutsos, Tanvi P. Gujarati, Sarah Mostame, and Donny Greenberg. Improving the variational quantum eigensolver using variational adiabatic quantum computing. *ACM Transactions on Quantum Computing (TQC)*, 3(1):1:1–1:20, March 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3479197>.
- [HY20] Travis S. Humble and Mingsheng Ying. Inaugural issue editorial for *ACM Transactions on Quantum Computing*. *ACM Transactions on Quantum Computing (TQC)*, 1(1):1:1–1:2, December 2020. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3411487>.
- [HY21] Travis S. Humble and Mingsheng Ying. Editorial on cele-
- Haner:2022:LDQ**
- Harwood:2022:IVQ**
- Humble:2020:IIE**
- Humble:2021:ECQ**

- brating quantum computing with ACM. *ACM Transactions on Quantum Computing (TQC)*, 2(4):13:1–13:2, December 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3488391>.
- Hillmich:2022:ADD**
- [HZK⁺22] Stefan Hillmich, Alwin Zulehner, Richard Kueng, Igor L. Markov, and Robert Wille. Approximating decision diagrams for quantum circuit simulation. *ACM Transactions on Quantum Computing (TQC)*, 3(4):22:1–22:21, December 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3530776>.
- Izquierdo:2021:TQA**
- [IHA21] Zoe Gonzalez Izquierdo, Itay Hen, and Tameem Albash. Testing a quantum annealer as a quantum thermal sampler. *ACM Transactions on Quantum Computing (TQC)*, 2(2):7:1–7:20, July 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3464456>.
- Ittah:2022:QSS**
- [IHKH22] David Ittah, Thomas Häner, Vadym Kliuchnikov, and Torsten Hoefer. QIRO: a static single assignment-based quantum program representation for optimization. *ACM Transactions on Quantum Computing (TQC)*, 3(3):14:1–14:32, September 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3491247>.
- Iten:2022:EPP**
- Raban Iten, Romain Moyal, Tony Metger, David Sutter, and Stefan Woerner. Exact and practical pattern matching for quantum circuit optimization. *ACM Transactions on Quantum Computing (TQC)*, 3(1):4:1–4:41, March 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3498325>.
- J:2022:QAI**
- Abhijith J., Adetokunbo Adeyoyin, John Ambrosiano, Petr Anisimov, William Casper, Gopinath Chennupati, Carleton Coffrin, Hristo Djidjev, David Gunter, Satish Karra, Nathan Lemons, Shizeng Lin, Alexander Malyzhenkov, David Masecarenas, Susan Mniszewski, Balu Nadiga, Daniel O’Malley, Diane Oyen, Scott Pakin, Lakshman Prasad, Randy Roberts, Phillip Romero, Nandakishore Santhi, Nikolai Sinitsyn, Pieter J. Swart, James G. Wendelberger, Boram Yoon, Richard Zamora, Wei Zhu, Stephan Eidenbenz, Andreas Bärtschi, Patrick J. Coles, Marc Vuffray, and Andrey Y. Lokhov. Quantum algorithm implementations for beginners.

- ACM Transactions on Quantum Computing (TQC)*, 3(4):18:1–18:92, December 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3517340>.
- Jaques:2022:LSS**
- [JH22] Samuel Jaques and Thomas Häner. Leveraging state sparsity for more efficient quantum simulations. *ACM Transactions on Quantum Computing (TQC)*, 3(3):15:1–15:17, September 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3491248>.
- Kong:2021:IAL**
- [Kon21] Martin Kong. On the impact of affine loop transformations in qubit allocation. *ACM Transactions on Quantum Computing (TQC)*, 2(3):9:1–9:40, September 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3465409>.
- Kerenidis:2020:QIP**
- [KP20] Iordanis Kerenidis and Anupam Prakash. A quantum interior point method for LPs and SDPs. *ACM Transactions on Quantum Computing (TQC)*, 1(1):5:1–5:32, December 2020. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3406306>.
- Lin:2021:USG**
- [LAH21] Joseph X. Lin, Eric R. Anschuetz, and Aram W. Harrow. Using spectral graph theory to map qubits onto connectivity-limited devices. *ACM Transactions on Quantum Computing (TQC)*, 2(1):3:1–3:30, February 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3436752>.
- Lubinski:2024:OAQ**
- [LCM⁺24] Thomas Lubinski, Carleton Coffrin, Catherine McGeoch, Pratik Sathe, Joshua Apanavicius, David Bernal Neira, and Quantum Economic Development Consortium(QED-C) Collaboration. Optimization applications as quantum performance benchmarks. *ACM Transactions on Quantum Computing (TQC)*, 5(3):18:1–18:??, September 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3678184>.
- Lee:2024:ARL**
- [LJHK24] Hochang Lee, Kyung Chul Jeong, Daewan Han, and Panjin Kim. An algorithm for reversible logic circuit synthesis based on tensor decomposition. *ACM Transactions on Quantum Computing (TQC)*, 5(3):15:1–15:??, September 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3673242>.

- Li:2023:QBI**
- [LQS⁺23] Hai-Sheng Li, Jinhui Quan, Shuxiang Song, Yuxing Wei, and Li Qing. Quantum bilinear interpolation algorithms based on geometric centers. *ACM Transactions on Quantum Computing (TQC)*, 4(3):21:1–21:??, September 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3591364>.
- Li:2023:QLL**
- [LSKA23] Ang Li, Samuel Stein, Sri Ram Krishnamoorthy, and James Ang. QASMBench: a low-level quantum benchmark suite for NISQ evaluation and simulation. *ACM Transactions on Quantum Computing (TQC)*, 4(2):10:1–10:??, June 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3550488>.
- Lewis:2024:FVQ**
- [LSZ24] Marco Lewis, Sadegh Soudjani, and Paolo Zuliani. Formal verification of quantum programs: Theory, tools, and challenges. *ACM Transactions on Quantum Computing (TQC)*, 5(1):1:1–1:??, March 2024. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3624483>.
- McGeoch:2024:MQU**
- [MF24] Catherine C. McGeoch and
- Mccaskey:2021:ECH**
- [MNS⁺21] Alexander Mccaskey, Thien Nguyen, Anthony Santana, Daniel Claudino, Tyler Kharazi, and Hal Finkel. Extending C++ for heterogeneous quantum-classical computing. *ACM Transactions on Quantum Computing (TQC)*, 2(2):6:1–6:36, July 2021. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3462670>.
- Madden:2022:BAQ**
- [MS22] Liam Madden and Andrea Simonetto. Best approximate quantum compiling problems. *ACM Transactions on Quantum Computing (TQC)*, 3(2):7:1–7:29, June 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3505181>.
- Mariella:2023:QAS**
- [MS23] Nicola Mariella and Andrea Simonetto. A quantum algorithm for the sub-graph isomorphism problem. *ACM Trans-*

- actions on Quantum Computing (TQC)*, 4(2):13:1–13:??, June 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3569095>.
- Ma:2021:QML**
- [MT21] Yunpu Ma and Volker Tresp. Quantum machine learning algorithm for knowledge graphs. *ACM Transactions on Quantum Computing (TQC)*, 2(3):10:1–10:28, September 2021. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3467982>.
- Nannicini:2023:OQA**
- [NBGJ23] Giacomo Nannicini, Lev S. Bishop, Oktay Günlük, and Petar Jurcevic. Optimal qubit assignment and routing via integer programming. *ACM Transactions on Quantum Computing (TQC)*, 4(1):7:1–7:??, March 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3544563>.
- Nguyen:2023:TNQ**
- [NLD⁺23] Thien Nguyen, Dmitry Lyakh, Eugene Dumitrescu, David Clark, Jeff Larkin, and Alexander McCaskey. Tensor network quantum virtual machine for simulating quantum circuits at exascale. *ACM Transactions on Quantum Computing (TQC)*, 4(1):6:1–6:??, March 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3607256>.
- [NM22] Thien Nguyen and Alexander J. McCaskey. Extending Python for quantum-classical computing via quantum just-in-time compilation. *ACM Transactions on Quantum Computing (TQC)*, 3(4):24:1–24:25, December 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3547334>.
- Nguyen:2022:EPQ**
- [PB22] Alexandru Paler and Robert Basmaidian. Energy cost of quantum circuit optimisation: Predicting that optimising Shor’s algorithm circuit uses 1 GWh. *ACM Transactions on Quantum Computing (TQC)*, 3(1):3:1–3:14, March 2022. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3490172>.
- Paler:2022:ECQ**
- [PBP23] Simone Perriello, Alessandro Barenghi, and Gerardo Pelosi. Improving the efficiency of quantum circuits for information set decoding. *ACM Transactions on Quantum Computing (TQC)*, 4(4):25:1–25:??, December 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3607256>.
- Perriello:2023:IEQ**

- Peham:2023:OSQ**
- [PBW23] Tom Peham, Lukas Burgholzer, and Robert Wille. On optimal subarchitectures for quantum circuit mapping. *ACM Transactions on Quantum Computing (TQC)*, 4(4):23:1–23:??, December 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3593594>.
- Pozzi:2022:URL**
- [PHSM22] Matteo G. Pozzi, Steven J. Herbert, Akash Sengupta, and Robert D. Mullins. Using reinforcement learning to perform qubit routing in quantum compilers. *ACM Transactions on Quantum Computing (TQC)*, 3(2):10:1–10:25, June 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3520434>.
- Paraskevopoulos:2024:SCS**
- [PSAF24] Nikiforos Paraskevopoulos, Fabio Sebastian, Carmen G. Almudever, and Sebastian Feld. SpinQ: Compilation strategies for scalable spin-qubit architectures. *ACM Transactions on Quantum Computing (TQC)*, 5(1):4:1–4:??, March 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3624484>.
- Paler:2023:MLO**
- [PSFA23] Alexandru Paler, Lucian Sasu, Adrian-Catalin Florea, and Razvan Andonie. Machine learning optimization of quantum circuit layouts. *ACM Transactions on Quantum Computing (TQC)*, 4(2):12:1–12:??, June 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3565271>.
- Riofrio:2024:CQG**
- [RMJ⁺24] Carlos A. Riofrio, Oliver Mitevski, Caitlin Jones, Florian Krellner, Aleksandar Vuckovic, Joseph Doetsch, Johannes Klepsch, Thomas Ehmer, and Andre Luckow. A characterization of quantum generative models. *ACM Transactions on Quantum Computing (TQC)*, 5(2):12:1–12:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3655027>.
- Rosmanis:2024:HQC**
- [Ros24] Ansis Rosmanis. Hybrid quantum-classical search algorithms. *ACM Transactions on Quantum Computing (TQC)*, 5(2):8:1–8:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3648573>.
- Roch:2023:EPF**
- [RRN⁺23] Christoph Roch, Daniel Ratke, Jonas Nüßlein, Thomas Gabor, and Sebastian Feld. The effect of penalty factors of constrained Hamiltonians on the

- eigenspectrum in quantum annealing. *ACM Transactions on Quantum Computing (TQC)*, 4(2):14:1–14:??, June 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3577202>.
- Raymond:2023:HQA**
- [RSB⁺23] Jack Raymond, Radomir Stevanovic, William Bernoudy, Kelly Boothby, Catherine C. McGeoch, Andrew J. Berkley, Pau Farré, Joel Pasvolsky, and Andrew D. King. Hybrid quantum annealing for larger-than-QPU lattice-structured problems. *ACM Transactions on Quantum Computing (TQC)*, 4(3):17:1–17:??, September 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3579368>.
- Smith:2023:LSN**
- [SDL⁺23] Ethan Smith, Marc Grau Davis, Jeffrey Larson, Ed Younis, Lindsay Bassman Oftelie, Wim Lavrijsen, and Costin Iancu. LEAP: Scaling numerical optimization based synthesis using an incremental approach. *ACM Transactions on Quantum Computing (TQC)*, 4(1):5:1–5:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3548693>.
- Shao:2022:CED**
- [Sha22] Changpeng Shao. Comput-
- ing eigenvalues of diagonalizable matrices on a quantum computer. *ACM Transactions on Quantum Computing (TQC)*, 3(4):21:1–21:20, December 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3527845>.
- Shaydulin:2023:PTQ**
- [SLL⁺23] Ruslan Shaydulin, Phillip C. Lotshaw, Jeffrey Larson, James Ostrowski, and Travis S. Humble. Parameter transfer for quantum approximate optimization of weighted MaxCut. *ACM Transactions on Quantum Computing (TQC)*, 4(3):19:1–19:??, September 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3584706>.
- Shao:2022:FQI**
- [SM22] Changpeng Shao and Ashley Montanaro. Faster quantum-inspired algorithms for solving linear systems. *ACM Transactions on Quantum Computing (TQC)*, 3(4):20:1–20:23, December 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3520141>.
- Smith:2023:TES**
- [SRM⁺23] Kaitlin N. Smith, Gokul Subramanian Ravi, Prakash Murali, Jonathan M. Baker, Nathan Earnest, Ali Javadi-Cabhari, and

- Frederic T. Chong. TimeStitch: Exploiting slack to mitigate decoherence in quantum circuits. *ACM Transactions on Quantum Computing (TQC)*, 4(1):8:1–8:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3548778>.
- Suau:2021:PQC**
- [SSC21] Adrien Suau, Gabriel Staffelbach, and Henri Calandra. Practical quantum computing: Solving the wave equation using a quantum approach. *ACM Transactions on Quantum Computing (TQC)*, 2(1):2:1–2:35, February 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3430030>.
- Suau:2023:QGI**
- [SSTS23] Adrien Suau, Gabriel Staffelbach, and Aida Todri-Sanial. qprof: a gprof-inspired quantum profiler. *ACM Transactions on Quantum Computing (TQC)*, 4(1):4:1–4:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3529398>.
- Tate:2023:BCQ**
- [TFH⁺23] Reuben Tate, Majid Farhadi, Creston Herold, Greg Mohler, and Swati Gupta. Bridging classical and quantum with SDP initialized warm-starts for QAOA. *ACM Transactions on Quantum Computing (TQC)*, 4(2):9:1–9:??, June 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3549554>.
- Ushijima-Mwesigwa:2021:MCO**
- [UMSN⁺21] Hayato Ushijima-Mwesigwa, Ruslan Shaydulin, Christian F. A. Negre, Susan M. Mniszewski, Yuri Alexeev, and Ilya Safro. Multilevel combinatorial optimization across quantum architectures. *ACM Transactions on Quantum Computing (TQC)*, 2(1):1:1–1:29, February 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3425607>.
- Utt:2024:QMC**
- [UVM24] Zachery Utt, Daniel Volya, and Prabhat Mishra. Quantum measurement classification using statistical learning. *ACM Transactions on Quantum Computing (TQC)*, 5(2):7:1–7:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3644823>.
- Vazquez:2022:EQL**
- [VHW22] Almudena Carrera Vazquez, Ralf Hiptmair, and Stefan Wöerner. Enhancing the quantum linear systems algorithm using Richardson extrapolation. *ACM Transactions on Quantum Computing (TQC)*, 3(1):2:1–2:37, March 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3549554>.

- ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3490631>.
- Vandaele:2024:OHG**
- [VMPV24] Vivien Vandaele, Simon Martiel, Simon Perdrix, and Christophe Vuillot. Optimal Hadamard gate count for Clifford + T synthesis of Pauli rotations sequences. *ACM Transactions on Quantum Computing (TQC)*, 5(1):6:1–6:??, March 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3639062>.
- Wille:2022:TQC**
- [WHB22] Robert Wille, Stefan Hillmich, and Lukas Burgholzer. Tools for quantum computing based on decision diagrams. *ACM Transactions on Quantum Computing (TQC)*, 3(3):13:1–13:17, September 2022. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3491246>.
- Wu:2021:ISI**
- [Wu21] Xiaodi Wu. Introduction to the special issue on the techniques of programming languages, logic, and formal methods in quantum computing. *ACM Transactions on Quantum Computing (TQC)*, 2(4):15:1–15:3, December 2021. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3488389>.
- Xu:2023:AQC**
- [XHB⁺23] Yilun Xu, Gang Huang, Jan Balewski, Alexis Morvan, Kasra Nowrouzi, David I. Santiago, Ravi K. Naik, Brad Mitchell, and Irfan Siddiqi. Automatic qubit characterization and gate optimization with QubiC. *ACM Transactions on Quantum Computing (TQC)*, 4(1):3:1–3:??, March 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3529397>.
- Yuen:2023:RSC**
- [YN23] Henry Yuen and Ashwin Nayak. Rigidity of superdense coding. *ACM Transactions on Quantum Computing (TQC)*, 4(4):24:1–24:??, December 2023. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3593593>.
- Zhan:2024:OIS**
- [ZGH24] Caitao Zhan, Himanshu Gupta, and Mark Hillery. Optimizing initial state of detector sensors in quantum sensor networks. *ACM Transactions on Quantum Computing (TQC)*, 5(2):10:1–10:??, June 2024. CODEN ???? ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3655028>.
- Zheng:2023:BAC**
- [ZLTY23] Muqing Zheng, Ang Li, Tamás Terlaky, and Xiu Yang. A

Bayesian approach for characterizing and mitigating gate and measurement errors. *ACM Transactions on Quantum Computing (TQC)*, 4(2):11:1–11:??, June 2023. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3563397>.

Zhang:2024:CAD

- [ZZC⁺24] Fang Zhang, Xing Zhu, Rui Chao, Cupjin Huang, Linghang Kong, Guoyang Chen, Dawei Ding, Haishan Feng, Yihuai Gao, Xiaotong Ni, Liwei Qiu, Zhe Wei, Yueming Yang, Yang Zhao, Yaoyun Shi, Weifeng Zhang, Peng Zhou, and Jianxin Chen. A classical architecture for digital quantum computers. *ACM Transactions on Quantum Computing (TQC)*, 5(1):3:1–3:??, March 2024. CODEN ????. ISSN 2643-6809 (print), 2643-6817 (electronic). URL <https://dl.acm.org/doi/10.1145/3626199>.