

Bibliography

- [1] Paul Benioff. “The computer as a physical system: A microscopic quantum mechanical Hamiltonian model of computers as represented by Turing machines”. In: *Journal of statistical physics* 22.5 (1980), pp. 563–591.
- [2] D-Wave’s Systems. *D-Wave Ocean Software Documentation*. Available at <https://docs.ocean.dwavesys.com/en/stable/d-wave-ocean-software-documentation> (2021/04/13).
- [3] GeeksforGeeks. *Evolutions of Microprocessors*. Available at <https://www.geeksforgeeks.org/evolution-of-microprocessors/>.
- [4] E.R. Johnston, N. Harrigan, and M. Gimeno-Segovia. *Programming Quantum Computers: Essential Algorithms and Code Samples*. O’Reilly Media, 2019. ISBN: 9781492039631. URL: <https://books.google.se/books?id=SKegDwAAQBAJ>.
- [5] National Institute of Standards and Technology. *Quantum logic gates NIST page*. Available at <https://www.nist.gov/topics/physics/introduction-new-quantum-revolution/quantum-logic-gates>.
- [6] H. Häffner, C.F. Roos, and R. Blatt. “Quantum computing with trapped ions”. In: *Physics Reports* 469.4 (2008), pp. 155–203. ISSN: 0370-1573. DOI: <https://doi.org/10.1016/j.physrep.2008.09.003>. URL: <https://www.sciencedirect.com/science/article/pii/S0370157308003463>.
- [7] Nicholas Metropolis et al. “Equation of state calculations by fast computing machines”. In: *The journal of chemical physics* 21.6 (1953), pp. 1087–1092.
- [8] NVIDIA. *NVIDIA CUDA developer zone*. Available at <https://developer.nvidia.com/cuda-zone>.
- [9] Dimitris Mavrommatis. *CUDA GPU Implementation of Travelling Salesman Problem*. Available at repository <https://github.com/slowr/TSP-Cuda>.

- [10] D-Wave's Systems. *More than 250 Quantum Computing applications*. Available at <https://www.dwavesys.com/applications> (2021/04/16).
- [11] AIMultiple. *Top 20 Quantum Computing Use Cases in 2021*. Available at <https://research.aimultiple.com/quantum-computing-applications/> (2021/04/16).
- [12] David L. Applegate et al. *The traveling salesman problem: a computational study*. Princeton university press, 2006.
- [13] William J Cook. *In pursuit of the traveling salesman: mathematics at the limits of computation*. Princeton University Press, 2011.
- [14] Gregorio Hernández Peñalver. *Complejidad NP-Complejidad*. Available at http://www.dma.fi.upm.es/personal/gregorio/optimizacion_combinatoria/ComplejidadNP.pdf (2021/04/21).
- [15] Tosio Kato. "On the adiabatic theorem of quantum mechanics". In: *Journal of the Physical Society of Japan* 5.6 (1950), pp. 435–439.
- [16] Max Born and Vladimir Fock. "Beweis des adiabatenatzes". In: *Zeitschrift für Physik* 51.3-4 (1928), pp. 165–180.
- [17] Tadashi Kadowaki and Hidetoshi Nishimori. "Quantum annealing in the transverse Ising model". In: *Phys. Rev. E* 58 (5 1998), pp. 5355–5363. DOI: 10.1103/PhysRevE.58.5355. URL: <https://link.aps.org/doi/10.1103/PhysRevE.58.5355>.
- [18] Edward Farhi et al. "Quantum computation by adiabatic evolution". In: *arXiv preprint quant-ph/0001106* (2000).
- [19] D-Wave's Systems. *Binary Quadratic Models*. Available at <https://docs.ocean.dwavesys.com/en/stable/concepts/bqm.html> (2021/04/21).
- [20] Fred Glover, Gary Kochenberger, and Yu Du. *A Tutorial on Formulating and Using QUBO Models*. 2019. arXiv: 1811.11538 [cs.DS].
- [21] Andrew Lucas. "Ising formulations of many NP problems". In: *Frontiers in Physics* 2 (2014), p. 5.
- [22] Nike Dattani and Nick Chancellor. "Embedding quadratization gadgets on Chimera and Pegasus graphs". In: *arXiv preprint arXiv:1901.07676* (2019).

- [23] Stefanie Zbinden et al. “Embedding Algorithms for Quantum Annealers with Chimera and Pegasus Connection Topologies”. In: *High Performance Computing*. Ed. by Ponnuswamy Sadayappan et al. Cham: Springer International Publishing, 2020, pp. 187–206. ISBN: 978-3-030-50743-5.
- [24] Kelly Boothby et al. *Next-Generation Topology of D-Wave Quantum Processors*. 2020. arXiv: 2003.00133 [quant-ph].
- [25] Jun Cai, William G. Macready, and Aidan Roy. *A practical heuristic for finding graph minors*. 2014. arXiv: 1406.2741 [quant-ph].
- [26] Ben Turner. *World’s 1st multinode quantum network is a breakthrough for the quantum internet*. Available at <https://www.livescience.com/three-node-quantum-network.html>.
- [27] Matt Swayne. *TQD Exclusive: With Key Partnerships in Place, PsiQuantum Sets Sight on Delivering Commercially Viable 1 Million-Qubit Quantum Computer*. Available at <https://thequantumdaily.com/2021/06/07/tqd-exclusive-with-key-partnerships-in-place-psiquantum-sets-sight-on-delivering-commercially-viable-1-million-qubit-quantum-computer/>.

Technical Reports:

- D-Wave Systems Inc., "Choosing good problems for quantum annealing", Corporate Headquarters, Burnaby, Canada, Tech. Rep. 14-1046A-A. 2020-09-06.
- D-Wave Systems Inc., "D-Wave Problem-Solving Handbook", Corporate Headquarters, Burnaby, Canada, Tech. Rep. 9-1171A-H. 2021-02-04.

User Manual:

- D-Wave Systems Inc., "D-Wave Solver Properties and Parameters Reference", Corporate Headquarters, Burnaby, Canada, User Manual. 9-1171A-H. 2021-01-28.
- D-Wave Systems Inc., " Solver Computation Time", Corporate Headquarters, Burnaby, Canada, User Manual. 09-1107B-C. 2021-02-09.

Online Documentation and Guides:

- D-Wave Systems Inc., "Solving Problems With D-Wave Solvers", https://docs.dwavesys.com/docs/latest/c_gs_3.html
- D-Wave Systems Inc., "Quantum Computing Tutorial Part 1: Quantum annealing, QUBOs and more", D-Wave Systems, YouTube. <https://youtu.be/teraaPiaG8s>
- D-Wave Systems Inc., "Quantum Computing Tutorials Part 2: QUBOs and Embedding", D-Wave Systems, YouTube. <https://youtu.be/vknIOydOJOo>
- D-Wave Systems Inc., "Solving Problems With D-Wave Solvers", D-Wave Systems, YouTube. <https://youtu.be/rOrvvF-xjD4>

