References

- Scott Aaronson. Quantum computing, postselection, and probabilistic polynomial-time. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 461(2063):3473–3482, 8November 2005.
- Scott Aaronson. Lower bounds for local search by quantum arguments. SIAM Journal on Computing, 35(4):804–824, 2006.
- [3] Dorit Aharonov and Oded Regev. A lattice problem in quantum NP. In Proceedings of the 44th Annual IEEE Symposium on Foundations of Computer Science, pages 210–219, Washington, DC, USA, 2003. IEEE Computer Society.
- [4] Dorit Aharonov and Oded Regev. Lattice problems in NP ∩ coNP. Journal of the ACM, 52(5):749–765, 2005.
- [5] David Aldous. Minimization algorithms and random walk on the *d*-cube. Annals of Probability, 11(2):403–413, 1983.
- [6] Andris Ambainis, Andrew M. Childs, Ben W. Reichardt, Robert Špalek, and Shengyu Zhang. Any AND-OR formula of size N can be evaluated in time N^{1/2+o(1)} on a quantum computer. In Proceedings of the 48th Annual IEEE Symposium on Foundations of Computer Science, pages 363–372, Washington, DC, United States, October 2007. IEEE Computer Society Press.
- [7] Andris Ambainis, Ashwin Nayak, Amnon Ta-Shma, and Umesh Vazirani. Dense quantum coding and quantum finite automata. *Journal of the ACM*, 49(4):496–511, 2002.
- [8] W. Banaszczyk. New bounds in some transference theorems in the geometry of numbers. *Mathematische Annalen*, 296(1):625–635, 1993.
- [9] Robert Beals, Harry Buhrman, Richard Cleve, Michele Mosca, and Ronald de Wolf. Quantum lower bounds by polynomials. *Journal of the ACM*, 48(4):778–797, 2001.
- [10] Richard Beigel, Nick Reingold, and Daniel A. Spielman. PP is closed under intersection. Journal of Computer and System Sciences, 50(2):191–202, 1995.
- [11] Oded Goldreich and Shafi Goldwasser. On the limits of nonapproximability of lattice problems. *Journal of Computer and System Sciences*, 60(3):540– 563, 2000.
- [12] Lov K. Grover. A fast quantum mechanical algorithm for database search. In Proceedings of the Twenty-Eighth Annual ACM Symposium on the Theory of Computing, pages 212–219, New York, NY, USA, 22–24 May 1996. ACM.

- [13] Matthew B. Hastings. An area law for one-dimensional quantum systems. Journal of Statistical Mechanics: Theory and Experiment, P08024, 2007.
- [14] Peter Hoyer, Troy Lee, and Robert Špalek. Negative weights make adversaries stronger. In *Proceedings of the Thirty-Ninth Annual ACM Sympo*sium on Theory of Computing, pages 526–535, New York, NY, USA, 2007. ACM.
- [15] Jonathan Katz and Luca Trevisan. On the efficiency of local decoding procedures for error-correcting codes. In *Proceedings of the Thirty-Second Annual ACM Symposium on Theory of computing*, pages 80–86, New York, NY, USA, 2000. ACM.
- [16] Iordanis Kerenidis and Ronald de Wolf. Exponential lower bound for 2query locally decodable codes via a quantum argument. *Journal of Computer and System Sciences*, 90(3):109–114, 2004. Special issue on STOC 03.
- [17] Sophie Laplante, Troy Lee, and Mario Szegedy. The quantum adversary method and classical formula size lower bounds. *Computational Complexity*, 15(2):163–196, 2006.
- [18] Noam Nisan and Mario Szegedy. On the degree of Boolean functions as real polynomials. *Computational Complexity*, 4(4):301–313, 1994.
- [19] Ryan O'Donnell and Rocco A. Servedio. New degree bounds for polynomial threshold functions. In *Proceedings of the Thirty-Fifth Annual ACM Symposium on Theory of computing*, pages 325–334, New York, NY, USA, 2003. ACM. Full version available at: http://www.cs.cmu.edu/ odonnell/. To appear in Combinatorica.
- [20] Chris Peikert. Public-key cryptosystems from the worst-case shortest vector problem: Extended abstract. In *Proceedings of the 41st Annual ACM Symposium on Theory of Computing*, pages 333–342, New York, NY, USA, 2009. ACM.
- [21] Oded Regev. On lattices, learning with errors, random linear codes, and cryptography. In Proceedings of the Thirty-Seventh Annual ACM Symposium on Theory of Computing, pages 84–93, New York, NY, USA, 2005. ACM.
- [22] Alexander A. Sherstov. Approximate inclusion-exclusion for arbitrary symmetric functions. In *Proceedings of the 23rd Annual IEEE Conference on Computational Complexity*, pages 112–123, Los Alamitos, CA, USA, 22–26June 2008. IEEE Computer Society.
- [23] Ronald de Wolf. A note on quantum algorithms and the minimal degree of epsilon-error polynomials for symmetric functions. *Quantum Information* and Computation, 8(10):943–950, 2008.