

Quantum Error-Correcting Codes

See also Quantum Computation

- [1] Salah A. Aly, Andreas Klappenecker, and Kiran Sarvepalli Pradeep, *Subsystem codes*, IEEE International Symposium on Information Theory, Toronto, Canada, 2008 (ISIT 08), IEEE, New York, 2008, pp. 369–373.
- [2] Thomas Beth, Christopher Charnes, Markus Grassl, Gernot Alber, Aldo Delgado, and Michael Mussinger, *A new class of designs which protect against quantum jumps*, Des. Codes Cryptogr. **29** (2003), no. 1-3, 51–70. MR MR1993156 (2004i:94065)
- [3] A. Robert Calderbank, Eric M. Rains, P. W. Shor, and Neil J. A. Sloane, *Quantum error correction via codes over GF(4)*, IEEE Trans. Inform. Theory **44** (1998), no. 4, 1369–1387. MR MR1665774 (99m:94063)
- [4] Andrew W. Cross, David P. DiVincenzo, and Barbara M. Terhal, *A comparative code study for quantum fault-tolerance*, 2007.
- [5] G. David Forney, Jr., Markus Grassl, and Saikat Guha, *Convolutional and tail-biting quantum error-correcting codes*, IEEE Trans. Inform. Theory **53** (2007), no. 3, 865–880. MR MR2302801
- [6] David G. Glynn, T. Aaron Gulliver, Johannes G. Maks, and Manish K. Gupta, *The geometry of additive quantum codes*, Springer, 2006.
- [7] M. Grassl, Thomas Beth, and T. Pellizzari, *Codes for the quantum erasure channel*, Phys. Rev. A (3) **56** (1997), no. 1, 33–38. MR MR1459695 (98f:81044)
- [8] M. Grassl, Thomas Beth, and M. Rötteler, *On optimal quantum codes*, International Journal of Quantum Information **2** (2004), no. 1, 55–64.
- [9] Markus Grassl and Thomas Beth, *Quantum BCH codes*, Proceedings X Symposium on Theoretical Electrical Engineering. Magdeburg, Sept. 6–9, 1999, 1999, pp. 207–212.
- [10] Markus Grassl and Martin Rötteler, *Quantum block and convolutional codes from self-orthogonal product codes*, Proceedings 2005 IEEE International Symposium on Information Theory (ISIT 2005), 2005, pp. 1018–1022.

- [11] Markus Grassl and Martin Rötteler, *Quantum convolutional codes: Encoders and structural properties*, Forty-Fourth Annual Allerton Conference, Allerton House, UIUC, Illinois, USA Sept 27-29, 2006, 2006, pp. 510–519.
- [12] Min-Hsiu Hsieh, Igor Devetak, and Todd Brun, *General entanglement-assisted quantum error-correcting codes*, Physical Review A (Atomic, Molecular, and Optical Physics) **76** (2007), no. 6, 062313.
- [13] A. Klappenecker and M. Rötteler, *Remarks on Clifford codes*, Quantum Information and Computation **4** (2004), no. 2, 152–160.
- [14] A. Klappenecker and P. K. Sarvepalli, *Clifford code constructions of operator quantum error-correcting codes*, IEEE Transactions on Information Theory **54** (2008), no. 12, 5760–5765.
- [15] Andreas Klappenecker and Martin Rötteler, *Unitary error bases: Constructions, equivalence, and applications*, Applied Algebra, Algebraic Algorithms and Error-correcting Codes (Toulouse, 2003), Lecture Notes in Comput. Sci., vol. 2643, Springer, Berlin, 2003, pp. 139–149. MR MR2042421 (2005c:94088)
- [16] ———, *On the structure of nonstabilizer Clifford codes*, Quantum Inf. Comput. **4** (2004), no. 2, 152–160. MR MR2065357 (2005h:94086)
- [17] Annika Niehage, *Quantum Goppa codes over hyperelliptic curves*, Diplomarbeit, Universität Mannheim, 2004.
- [18] Annika Niehage, *Nonbinary quantum Goppa codes exceeding the quantum Gilbert-Varshamov bound*, Quantum Inf. Process. **6** (2007), no. 3, 143–158. MR MR2341674 (2008e:94055)
- [19] Michel Planat, *Entangling gates in even Euclidean lattices such as Leech lattice*, 2010.
- [20] Michel Planat and Philippe Jorrand, *Group theory for quantum gates and quantum coherence*, J. Phys. A **41** (2008), no. 18, 182001, 8. MR MR2453960 (2009i:81023)
- [21] Michel Planat and Maurice R. Kibler, *Unitary reflection groups for quantum fault tolerance*, J. Comput. Theor. Nanosci. **7** (2010), no. 9, 1759–1770.
- [22] M. Rötteler, M. Grassl, and Thomas Beth, *On quantum MDS codes*, IEEE International Symposium on Information Theory – Proceedings, 2004, p. 355.

- [23] Harold N. Ward, *An Introduction to Algebraic Coding Theory*, Coding Theory and Quantum Computing, Contemp. Math., vol. 381, Amer. Math. Soc., Providence, RI, 2005, pp. 27–52. MR MR2170798 (2006e:94001)