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Suggested projects:

1. (quantum cc of set disjointness) [Alexander Razborov](http://arxiv.org/find/quant-ph/1/au%3A%2BRazborov_A/0/1/0/all/0/1). Quantum communication complexity of symmetric predicates. arxiv.org/pdf/quant-ph/0204025. Nayak has lecture notes on the result <http://www.math.uwaterloo.ca/~anayak/courses/co781-s04/lectures/> and you might find it elsewhere.
2. (Kitaev’s lower bound on strong coin flipping). See G. Gutoski and J. Watrous. Toward a general theory of quantum games. STOC 565–574, 2007, and <http://people.csail.mit.edu/vidick/kitaev_coinflip.pdf>
3. (Quantum weak coin flipping) [Carlos Mochon](http://arxiv.org/find/quant-ph/1/au%3A%2BMochon_C/0/1/0/all/0/1). Quantum weak coin flipping with arbitrarily small bias. <http://arxiv.org/abs/0711.4114v1>
4. (strong coin flipping from weak coin flipping) [André Chailloux](http://arxiv.org/find/quant-ph/1/au%3A%2BChailloux_A/0/1/0/all/0/1), [Iordanis Kerenidis](http://arxiv.org/find/quant-ph/1/au%3A%2BKerenidis_I/0/1/0/all/0/1). Optimal quantum strong coin flipping. <http://arxiv.org/abs/0904.1511>
5. (non-locality vs. communication complexity) [Gilles Brassard](http://publish.aps.org/search/field/author/Brassard_Gilles), [Harry Buhrman](http://publish.aps.org/search/field/author/Buhrman_Harry), [Noah Linden](http://publish.aps.org/search/field/author/Linden_Noah), [André Allan Méthot](http://publish.aps.org/search/field/author/Methot_Andre_Allan), [Alain Tapp](http://publish.aps.org/search/field/author/Tapp_Alain), and [Falk Unger](http://publish.aps.org/search/field/author/Unger_Falk) . Limit on Nonlocality in Any World in Which Communication Complexity Is Not Trivial. Phys. Rev. Lett. 96, 250401 (2006) [4 pages].
6. Read about stabilizer codes.