Final Project Guidelines

A central goal of this class has been to introduce you to a sufficient amount of background material so that you will be able to read (and eventually contribute to) the research literature in quantum information processing. For your final project in this course, you are to read a portion of this literature that is interesting to you and to produce a detailed, thoughtful, understandable, carefully written and referenced paper summarizing this literature **in your own words**. There is no strict length requirement for this, but 5-10 pages (11-12pt font) should be sufficient. I am not asking you to produce new results, but rather to convince me that you have learned something from the paper(s) you read, and maybe also teach me something new in the process. Your project should be typeset (.tex is probably the best option for this), but **please do not cut-and-paste equations from the .tex source of the papers on the arXiv.** You are encouraged to use your own notation, but please ensure that anything non-standard is clearly explained and that all notation consistent throughout your paper. You can find a list of potential research papers on the course website, although you are free to suggest other topics / papers that are not on this list.

It would be good for to you decide on a tentative topic by Wednesday, November 14th. Once you decide on a topic, please send me an email at jyard@uwaterloo.ca with the subject "QIC 710 course project" that contains

- A brief description of your background prior to this course
- A tentative title for your project
- A one-paragraph summary of what you expect your project to consist of
- A list of papers (with links if possible) on which you expect to base project

I am more than happy to meet with any of you in person who want to discuss your background and interests if you would like help in deciding on a topic. If you are already doing research outside this class, please do not choose papers that you have already carefully read for your own research. One way this project could benefit you, beyond this class, would be to point out things you hope to someday understand better for your own research (e.g., how the papers you are reading may be related to others topics or papers you are interested in).

Your paper will be due on Crowdmark by December 21th but extensions are possible.