Quantum Algorithms
CSPC 640, Syllabus

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Office hours: MT 3:30pm–4:30pm

Course Goals. The course CPSC 640 gives a self-contained introduction to quantum algorithms, one of the most exciting recent developments in computer science.

Background. We do not expect any background knowledge in quantum computing nor in quantum physics. You should know how to multiply a matrix with a vector, but the most important prerequisite is simply an open mind.

Grading Policy. Midterm exam 25%, final project 25%, assignments 45%, culture 5%. The grades will be assigned on an absolute scale: A=90-100, B=80-89, C=70-79, D=60-69, F=0-59. I might slightly curve the results if the grades are lower than expected.

The assignments will consist of about 6 paper and pencil homeworks and one small project. You have to submit 3 written summaries of talks to satisfy your culture requirements.

Dishonesty. Cheating will not be tolerated – see the Aggie code of honor. Cheating and plagiarism will be rewarded with the grade F*.

Required Textbook

- M. Nielsen and I. Chuang: Quantum Computation and Quantum Information, Cambridge University Press, 2000.

Recommended Books

- J. Stolze and D. Suter: Quantum Computing - A Short Course from Theory to Experiment, Wiley-VCH, 2004

Further information

- http://faculty.cs.tamu.edu/klappi/qalg/qalg.html