Introduction to Quantum Information Processing

Lecturer: Xiaodi Wu

Reading Assignment: Course Website; KLM Chap 1 and 2.

Welcome to CMSC 657: Introduction to Quantum Information Processing

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&

Happy New Academic Year!

Teaching Team

Instructor

- Instructor: Prof. Xiaodi Wu
- Contact: AVW 3257, xwu@cs.umd.edu
- Research: Quantum Information and Computation
- Joint Center for Quantum Information and Computer Science (QuICS)

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TA

- Shouvanik Chakrabarti, shouv@cs.umd.edu

Why Quantum Computing?

- ..... patiently waiting for your input ....
- ....

Quantum Computing

Tentative topics

- quantum mechanics of qubits; quantum circuits; quantum protocols;

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CMSC 657: Common Questions

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Interested in working with QuICS?

- Do very well in this course! Discuss project topics with me!

More logistics

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Please let me know ASAP if

- you cannot submit assignments electronically.
- time conflicts of exams.
- concerns about the difficulty of the course.
- anything that you wanted to discuss .....

You might be interested in ...

Workshop on Quantum Machine Learning

- Date(s): Sep 24 - 28. Hosted at QuICS.
- http://qml2018.quics.umd.edu/

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Some interested projects of QuICS

- Circuit Compilation and Optimization. e.g., try IBM QISKit Developer Challenge.
- Quantum Programming Languages.
- Quantum Algorithms for Optimization.
- .....

Reading Assignments on Linear Algebra

Linear algebra with Dirac notations

- KLM 2.1-2.6.
- A cheatsheet on our website.
- Optional exercise also on our website.