

# 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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Information Processing

&

Happy New Academic Year!

# Teaching Team

## Instructor

- ▶ Instructor: Prof. Xiaodi Wu
- ▶ Contact: IRB 5210, [xwu@cs.umd.edu](mailto:xwu@cs.umd.edu)
- ▶ Research: Quantum Information and Computation
- ▶ Joint Center for Quantum Information and Computer Science (QuICS)

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## TA

- ▶ Jessica Thompson, [jktho@cs.umd.edu](mailto:jktho@cs.umd.edu)

# Why Quantum Computing? or Why are you here?

- ▶ One sentence about who you are (e.g., name, major, graduate/undergraduate).
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- ▶ Hopefully, this round of introduction will help you find your group members.

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- ▶ selective quantum research frontiers.

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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 QuICS people!

# More logistics

## Office Hours

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- ▶ **ELMS:** distribute and submit assignments, grades, solutions.

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Please let us 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 knowing

## Course capacity

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## Some ongoing projects inside QulCS

- ▶ Circuit Compilation and Optimization.
- ▶ Quantum Programming Languages.
- ▶ Quantum Algorithms for Optimization.
- ▶ Quantum Computing meets Machine Learning.
- ▶ .....

# 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.