Projects:

For the course project, you will study a topic on quantum algorithms related to topics in the lecture. Your study should not only encompass a review of existing work on your chosen topic but also explore potential avenues for new research. While Generative AI tools can assist in brainstorming and refining your papers, they should not be the primary authors of your projects. Exceptional projects should offer original research insights. Although a list of recommended topics will be shared during the semester, you have the flexibility to select a topic outside of this list. You can opt to undertake the project individually or collaborate in a group, with a maximum of three students. Each group must have a distinct topic.

Your project will include the following deliverables:

a project proposal (one page), due March 1 (10% of your project grade);

a presentation to the class, to be scheduled during lecture times in the last two weeks of the semester (40%);

a draft paper (40%), due Apr 26;

the peer review of a draft paper (10%), due May 3;

A rebuttal letter and the final paper: due May 10.

Grading:

The grading of the project will be based on both instructor's review and the peer review.

Each student will be randomly assigned to be the reviewer on another project. This is a double-blind review process and includes 4 parts:

1. Authors submit their draft.
2. Reviewers write a comment letter (around one page), assessing the format, the literature review, analysis, and numerical results.

3. Authors write a rebuttal letter to respond to all comments and adjust their drafts accordingly.
4. Authors submit their final project.

Your final grade will be based on your comment letter, rebuttal letter, final project and presentation.

Criteria	Excellent(20~18)	Satisfactory(18~15)	Poor(15~0)
Format	Excellent structure and formatting.	Reasonable structure and formatting.	Hard to read and understand the content.
Review	Rich content and excellent delivery.	Adequate content and delivery.	Lack of content and hard to read.
Analysis	Correct analytical solution and derivation.	Correct analytical solution.	Incorrect analytical solution and lack of derivation.
Numerical results (if applicable)	Clearly validate the key aspects of the numerical method.	Clearly validate some aspects of the numerical method.	Incorrect or irrelevant validation.
Presentation	Excellent delivery and preparation.	Adequate delivery and preparation.	Ambiguous delivery and insufficient preparation.

By default, the same project grade will be given to each member of the same group, unless some group members have a significantly larger contribution than the others (in such a case, the author contribution should be explicitly documented in the final report, and the final grade will be assigned on a case-by-case basis). When all other factors are comparable, groups of smaller sizes may receive slightly higher scores.