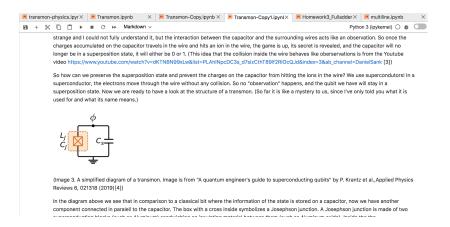
## Computational Physics 1 Midterm

Piaohan Xu

1. Report on the building block of quantum computer, the transmon.

A report is produced using Jupyter notebook. However I ran into a problem where the pictures from my local docker image could not be shown properly in the report. I'm out of time, but hopefully I will have a chance to fix it. As could be seen in the screenshot below:



The Jupyter notebook has the image embedded. However all the images are missing from the pdf file converted by Pandoc, named "Transmon Report".

The GitHub version also has problem displaying some of the images embedded. :( <a href="https://github.com/ubsuny/transmon/blob/main/Transmon.ipynb">https://github.com/ubsuny/transmon/blob/main/Transmon.ipynb</a>

But at least some are showing up. It could be a problem with my markdown code.

- 2. Issues are opened in GitHub. And closed as each task is attempted. I don't know how to do the listing on the Jupyter notebook however, so that task is still outstanding.
- 3. The youtube video address is: <a href="https://www.youtube.com/watch?v=9MFPvrjHgF0&ab\_channel=TheGoldennach">https://www.youtube.com/watch?v=9MFPvrjHgF0&ab\_channel=TheGoldennach</a>

Another part of the homework concerns the familiarization with version control tool, Github.

Shown in the screenshot below, a new branch named "piaohanx / HW3CP12021" has been created under the repository "ubsuny/QC\_fullAdder".



The solution to homework2 is then committed to this branch, and renamed "Homework 3 Full adder". A pull request was generated with a description of what I did in this document. I added some tags such as "CP1", "Jupyter", "QC", and etc.. The pull request is shown below:



CP1\_2021 is assigned to be the reviewer of this pull request. Thankfully my colleague Jinrui Bai was able to comment on this request and recommend a minor change (I committed the files hours before the due date :P)

Here is his recommendation:



The document was thus modified based on the recommendation. I think each of us were going really simple suggestions, so we wouldn't have to make complicated changes. So as to save time. :P

The suggestion I made to Jinrui's pull request is shown below, similarly I gave a simple suggestion. :)

