## Problem set 2

Due on February 15th, 5 pm PT.

The five problems are from the following version of my lecture notes:

linearmodel\_lecturenotes\_pengding20210201.pdf

Problem 2.3. This is be a tricky problem although it is about the simplest OLS.

Problem 3.5. This was a midterm exam problem before the pandemic. Start with q=2!

Problem 4.2. This is a tricky problem too. It is a famous problem. Try hard.

Problem 4.4. This extends the proof in the main text. It should not be too hard.

Problems 5.4. This is a challenging problem. But **F**isher's F statistic is famous.

These are **challenging** problems. Please go to the GSI's lab sessions and office hours to get some hints.