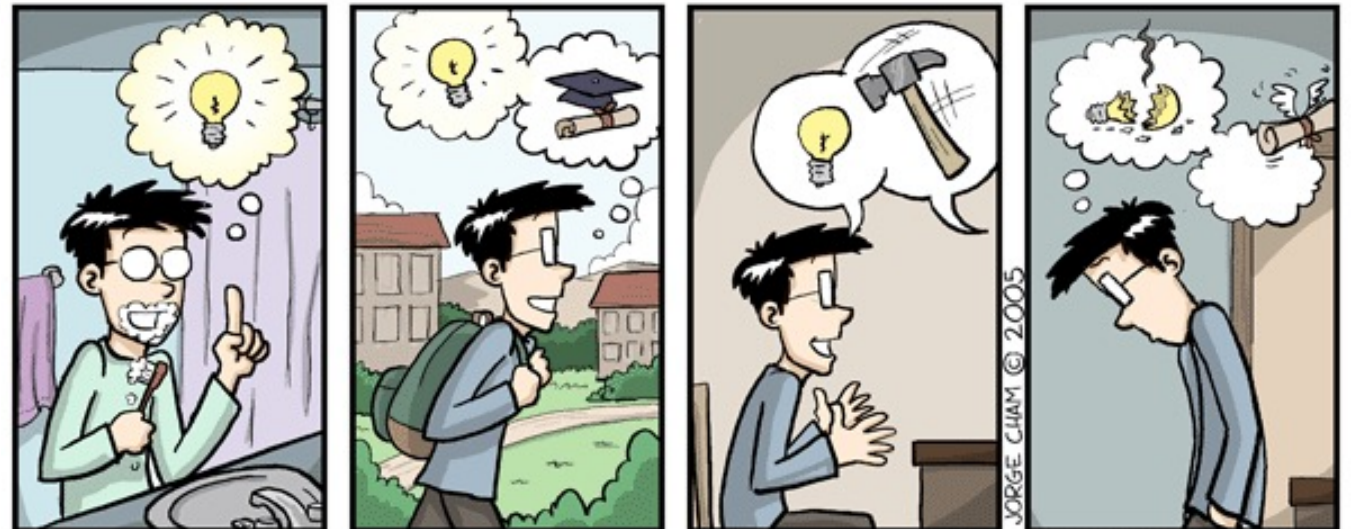
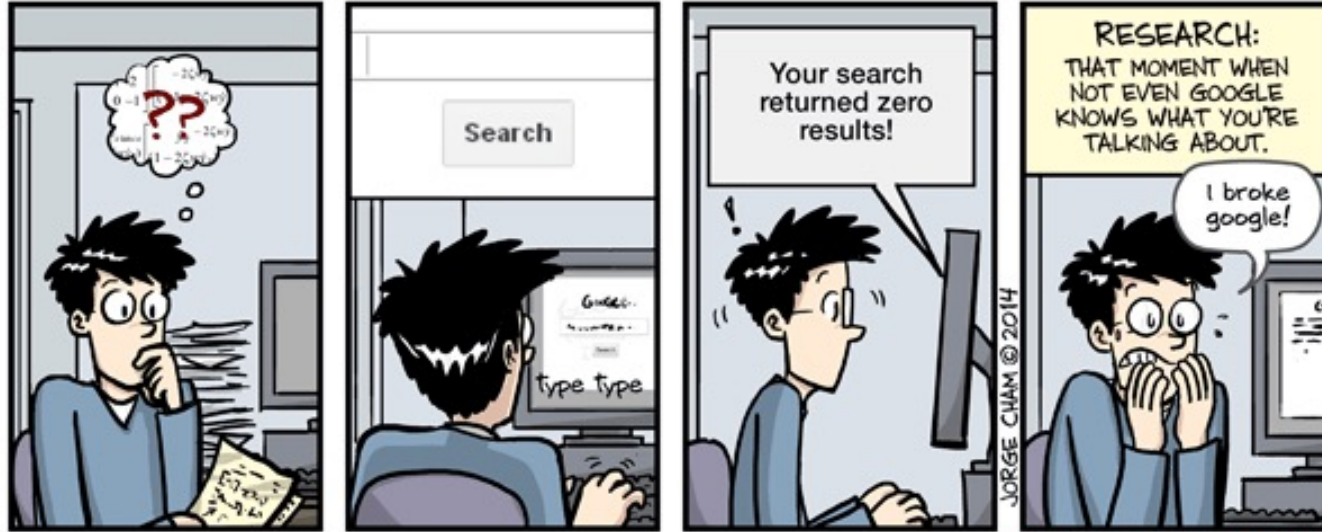


The final hurdle: the Research Proposal

- Completed in “co-investigator” groups (i.e. lab partners)
- 12 minute talk (every word counts!) [on December 8th](#)
- Propose a novel project to advance the field of biological engineering
 - Tangentially related to 20.109 via techniques or concepts
 - Can have computational component, but that cannot be the focus
 - Novel = not a project from another class or a UROP

Deciding on your topic and drafting your research question



How do you know if you have a novel project?

- Look at the most recent discoveries in the field you decide on as a group
 - What is the most recent advancement?
 - What do other scientists say is the biggest unanswered question?
- Start with the most recent literature on your topic
 - Look at the Discussion/Future Works section to identify knowledge gaps the authors point out
- Take that gap and figure out how you can apply a new perspective to solving the problem
 - Not enough to just follow up on the paper using similar methods

How do you know if you have a novel project?

Potential approaches include:

- Take a recent method/device and apply it in a different context through novel engineering design
- Combine approaches from multiple projects in novel ways which requires unique experimental choices
- Make/design something to help address an unanswered biological question

What are we doing today?

- Talk about the proposal presentation
- Hear about research from Amanda and Thomas
- Brainstorm with your co-investigators to identify topic areas of interest
- Hear about research and identifying a novel research idea for a grant proposal from Kylie
- Re-group and continue to work on developing your own proposal ideas