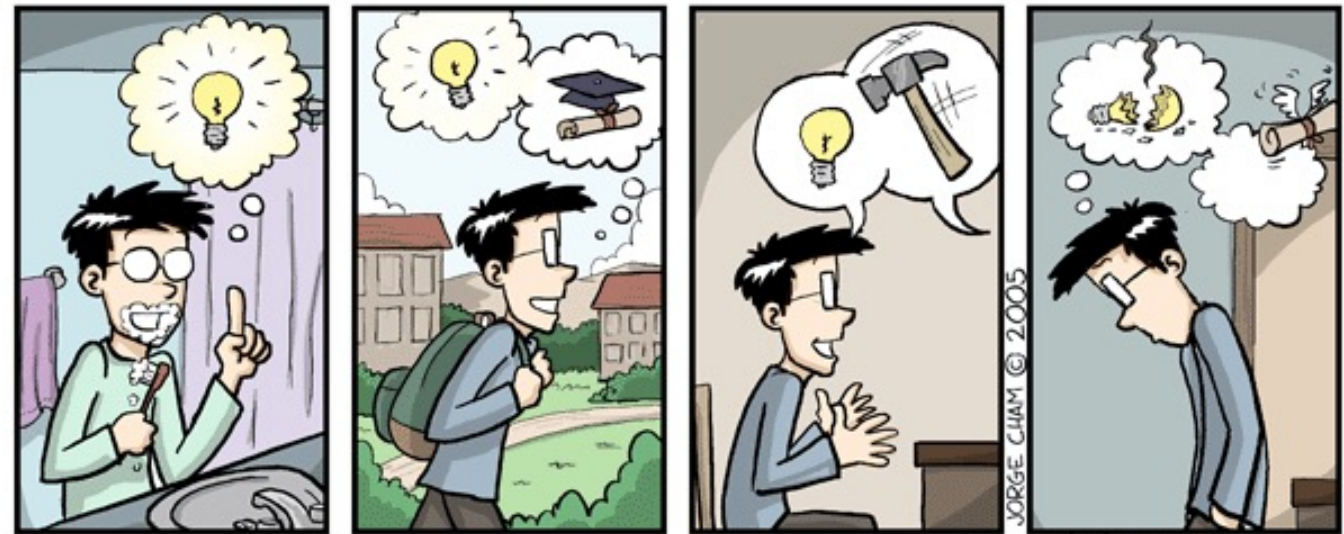
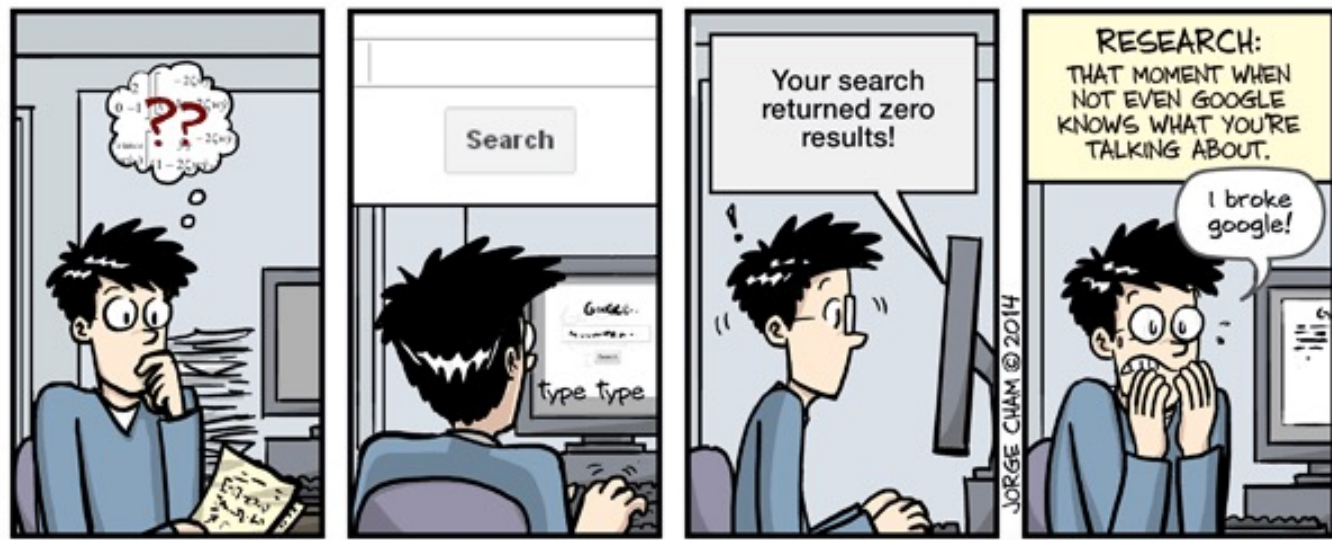


# M3D1: Brainstorm ideas for Research Proposal presentation



# The final hurdle: the Research Proposal

- Completed in “co-investigator” groups (i.e. lab partners)
- 12 minute talk (every word counts!)
- 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
- Project will include:
  - Research question/goal
  - Specific aims to address research goal
  - Alternative approaches to techniques proposed in specific aims
  - Ethical implications of your work

# 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

# What are we doing today?

- Discuss research from **Christine**'s perspective with her ongoing PhD project
- Do an initial chat with your lab partner/co-investigator to talk about ideas and common interests
- Discuss deciding on research questions and projects with a former 20.109 student, **Desmond Edwards** at [1:45pm](#)
- Re-group and continue to work on developing your own proposal ideas
- Discuss research and troubleshooting with a former 20.109 student and current TA, **Daphne Faber** at [3:45pm](#)
- Final regroup to put final touches on the research question/goal you think you would like to pursue for Mod 3