

How to be a good graduate student
*Patrice Koehl
Computer Science, UC Davis*

Being a CS Graduate Student is about

- Learning to do research
- Doing it
- Learning to communicate the results of your research
- Doing it

Why do we do CS research?

- Intellectual:** to advance science or technology
- Passion:** You are driven to it (your way to be creative)
- Ego:** I must be really smart
- Social:** To advance social goals
- Strategic:** On the path to reach a goal
- Economic:** High paying jobs
- Boredom:** For fun

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How do we conduct CS research?

- The 1/3 - 1/3 - 1/3 rule:**
- 33% preparation
 - 33% actually doing the research
 - 33% Communicating (writing paper, oral presentation)

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Too often, it is replaced with the "GS rule":
10% - 90% - 0%

What is research?

Your research is:

- Your papers
- Your software
- Any tools that you publish

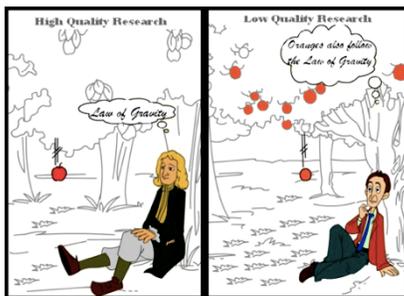
It is not:

- Your ideas
- Your proposals
- The notes in your lab book
- Your skills
- Whom you know....

What is good research?

- **Ground breaking work** (opens us a new line of research, that people follow) : **Best situation!**
- **Good incremental work** (most frequent for graduate students?)
- Useful work
- Aesthetically pleasing work
- Starts from, and leads to good questions
- Timely

Avoid "me-too" Research!



The Whole Brain Model: Ned Herrmann

Logical
Focuses on the facts and the bottom line

Creative
Sees the big picture and likes to have fun

Practical
Provides organization and follow-through

Relational
Tunes in to hear his own and others' feelings

What it takes to do good research

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PhD Student
Brain Structure

Frontal Lobe for procrastination

Posterior Lobe for Creative Avoidance

Parietal Lobe

Centre for Memory and Decision

Guilt Complex

Creative Neuron

Achievement Neuron

Dissatisfaction
Persistence
Suspicious
Organization

Creativity
Intuition
Intelligence
Open mind

What it takes to do good research

1. Time
2. More Time
3. More Time!
4. Writing skills!

Sloppy writing is sloppy thinking!
