

## Grad School Survival Skills

CPS 300: Introduction to Graduate Study

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September 2, 2009

## Announcements

- Mailing lists
  - Ping pong, Go, movies, etc.: [recreation@cs.duke.edu](mailto:recreation@cs.duke.edu)
  - Exchanging ideas on research and computing, forming project teams, etc.: [askgrad@cs.duke.edu](mailto:askgrad@cs.duke.edu)
    - Currently traffic is low, but we could resurrect it
  - Ask Diane to get onto these lists
- “Resources” pages on the website have been updated
- Thanks for your suggestions on what to cover in CPS 300!
  - Student panel for sharing info/experience
  - Overview of research projects and open positions
  - Academic/industry career planning

## Annual progress report

(cf. Addendum document)

Provide by the end of every fall:

- CV
  - Research summary (1-2 pages): big picture + progress + future directions
  - Progress statement (1 page): self assessment of progress + goals for the coming year + plan for meeting milestones
  - BibTeX bibliography of your pubs and works-in-progress
- Feedback from faculty around mid-February:
- Written feedback from your mentor/advisor
  - Discussion at a faculty meeting
  - Request for additional progress steps, or in the worst case, withdrawal (let's hope this won't happen!)

## On picking profs/topics

- Most important: work on something that you love
  - Or else grad life will be miserable
  - But then, tastes are sometimes acquired...
- Flexibility vs. concrete projects
- Large vs. small groups
- Hands-off vs. hand-on
- Practical impact vs. intellectual challenge
- Junior vs. senior
- Funding prospects
- Having non-CS advisor is fine, but requires more effort
  - Good idea to find a champion in CS

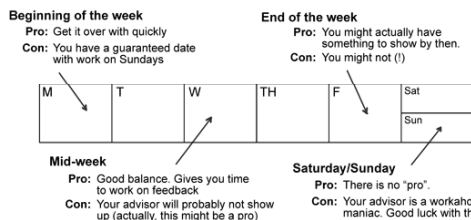
## On approaching profs

- Start early; they want to see you “in action” before committing
- Show you have background/skills, or can acquire them quickly
  - Past projects, current course project
  - Communicating, writing, coding...
- Show you have the right attitude/habits
  - Initiative, punctuality, genuineness, independence, meticulousness, tenacity, flexibility, ...
- Short, productive meetings > long, one-way monolog

- ☞ What if you got completely lost in the meeting?
- ☞ What if you were just given a paper to read?
- ☞ What if nothing concrete came out of the meeting?

## When to meet with advisors

### WHEN TO MEET WITH YOUR ADVISOR Is there ever a good time?



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WWW.PHDCOMICS.COM

<http://www.phdcomics.com/comics/archive.php?comicid=1025>

### Keep the pressure on!

- Too often, advisors make advisees pressured, guilty, and scared
- But it should be the other way around!
  - Good advisees should make advisors feel (happily) pressured, guilty, and even scared

*Take initiative!*

- Propose weekly goals, meeting agendas, new problems
  - Note "propose" ≠ "set"; you will need your advisor's guidance
- Learn new, related work yourself and fill your advisor in
  - It's your dissertation area—you should know it better than advisor
- Keep churning out high-quality write-ups until your advisor cannot keep up
  - Good strategy for getting more time from busy advisors



### Make meetings effective

- Start with a summary of last meeting and an agenda for this one
- End with concrete goals for next week
- Whatever you give to your advisor needs to show enough polish
  - Their time is more valuable, and they grow tired of correcting simple mistakes all the time
- *What if you get stuck?*
  - Come up with alternative approaches yourself
  - Keep a log of all thing you tried, and why they failed
  - Don't expect much low-level hand-holding from your advisor
    - Senior students may be more helpful
  - If all else failed, tell your advisor; don't wait until the next scheduled meeting
    - At least you have failed alternatives to report—still useful to research



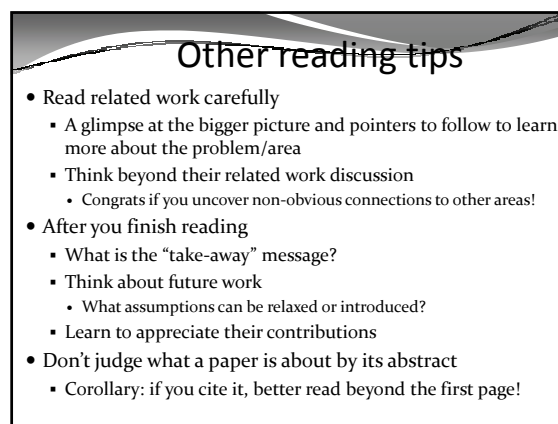
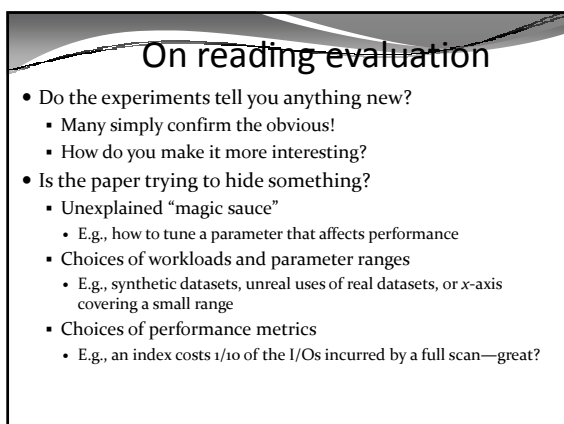
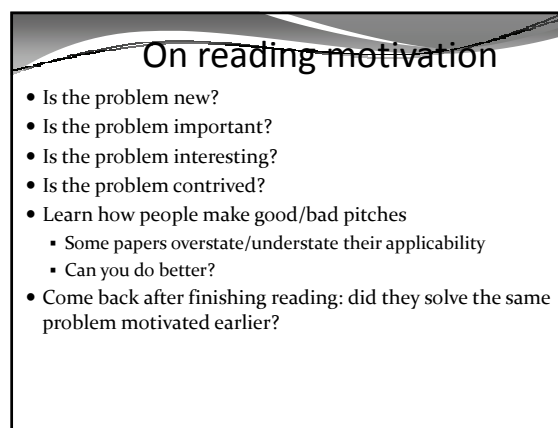
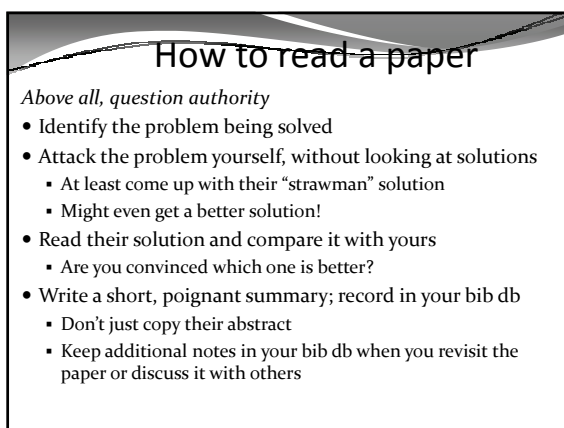
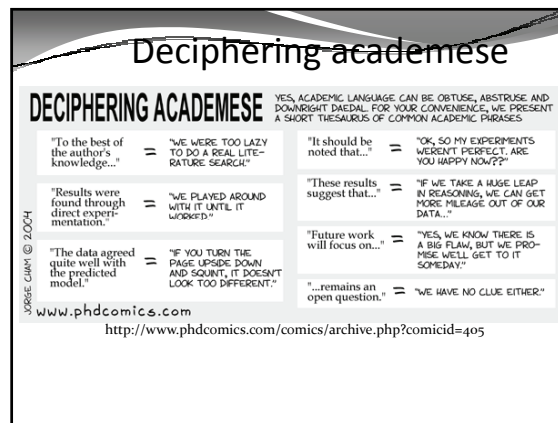
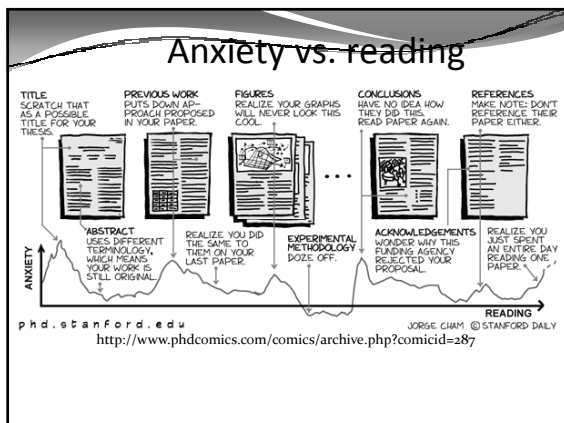
### On finding related work

**REFERENCES** MAKING SURE NO ONE HAS ALREADY WRITTEN YOUR THESIS  
phd.stanford.edu JORGE CHAM @STANFORD DAILY

http://www.phdcomics.com/comics/archive.php?comicid=286

### On finding related work

- Ask your advisor, who can offer good starting points and see not-so-obvious connections
- Follow citations (forward & backward)
- Google (Scholar) + online databases (e.g., ACM DL, DBLP)
  - Need to build up a list of useful keywords
- Rank using citations/venue prestige
- Routinely check top venues
- Share with fellow students (reading groups, journal clubs)
- Talk to people at seminars, conferences, ...
- Talk to those outside your field
  - Start with your fellow grad students!



## More announcements

- Next Wednesday: Joe Shamblin on computing in a computer science department
- Homework (due two weeks from now by email)
  - Talk to at least one faculty member or senior student
    - Get recommendation of a recent and/or important paper in an area/project that interests you
    - Get a sense of the important publication venues in this field
  - Read the paper suggested to you
  - Find a few (between 2 and 5) related papers; skim them
  - Prepare a BibTeX file of all above papers
  - Prepare a short document ( $\leq 2$  pages)
    - Summarize (in your own words) the paper you read
    - Write a few sentences about each related paper