How to Communicate

Tao LIN

September 2, 2025

Course schedule

Week	Date	Topics
1	2024. Sep. 03	Introduction to CS & AI
2	**2024. Sep. 10**	**How to communicate**
3	2024. Sep. 14	How to do presentation
4	2024. Sep. 24	How to be a good AI researcher (I): doing research I
5	2024. Oct. 07	How to be a good AI researcher (II): productivity and career
6	2024. Oct. 15	How to be a good AI researcher (III): academic paper writing and peer reviews
7	2024. Oct. 22	Sharing the experience of writing excellent academic papers and rebuttal
8	2024. Oct. 29	Practice course

Acknowledgement

- The 7 Cs of Communication, World of Work Project
- How To Ask Questions The Smart Way, Eric Steven Raymond
- Awesome Tips, JiaBin Huang

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Communication is the key to your career success!

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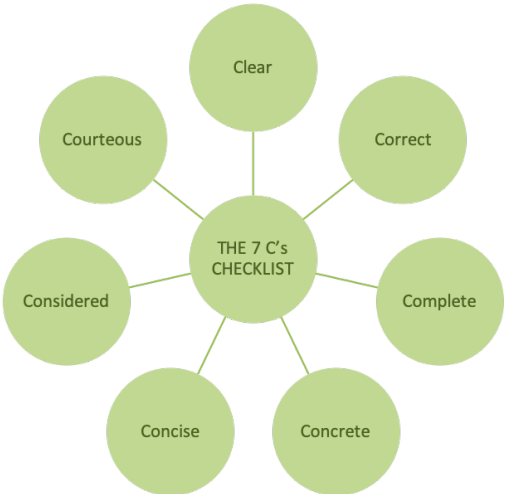
The 7 **C**'s of communication



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  - focus on the core points of your message
  - summary and deduction (if possible)

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- **The content of the communication itself.**

Dear Area Chairs and Senior Area Chairs,

We extend our sincere gratitude for your valuable efforts in the review process.

In our rebuttal, we have: (i) Clarified our contributions; (ii) Thoroughly reviewed and rephrased the manuscript for improved readability; (iii) Added additional experiments to verify effectiveness, including comparisons with more baselines across various datasets and tasks in attached PDF; (iv) Expanded discussions on related works.

We believe we have adequately addressed all the reviewers' concerns:

- Common concerns regarding logical expression and notation have been addressed through manuscript revisions (ii).
- Reviewer fJin's request for more extensive verifications through larger scale experiments has been met (iii).
- Reviewer K3hg had significant misunderstandings regarding some techniques in related works and misinterpreted some of our technical solutions and theoretical results. For instance, they incorrectly claimed that RDED [a] selects hard samples with a larger classification loss, arguing that this contradicts our theoretical results. In fact, RDED selects easy samples with a smaller loss, which is consistent with our analysis. We have clarified these misunderstandings and explained our theoretical results and technical solutions in detail (i and iv).
- Reviewer zbwg's requests for experiments on high-resolution datasets, more downstream tasks, and additional SOTA comparisons have been addressed (iii). We have also clarified the generalization of our theoretical results (i).
- Reviewer 7u7z's request for more detailed discussions about the relationship between our contributions and related work has been thoroughly addressed (i and iv).

We appreciate your time and effort. We believe our paper is now significantly strengthened after the rebuttal and hope this message assists in your decision-making process.

Best regards,

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Some communications simply must be correct, clear and concise.

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Completeness
is one of the most important of the 7 Cs of communication.

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    - ensuring that core communications focus on core messages.

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- your arguments should be based on solid facts and opinions from credible sources
- you should share irrefutable data to support your argument.

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adjective

giving a lot of information clearly and in a few words; brief but comprehensive.
"a concise account of the country's history"

Similar: succinct | short | brief | to the point | pithy | incisive | short and sweet

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The more you say, the more risk of confusion $\Rightarrow$ focuses solely on the key points you need to deliver.

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2. Your messages should be friendly, professional, considerate, respectful, open, and honest.
3. Please always consider your messages from the point of view of the audience!

Dear ACs and SACs:

We greatly appreciate the feedback from all reviewers and the AC, and we are committed to addressing concerns to improve our work. However, we must express our deep concern regarding **Reviewer tGwA's** evaluation, which appears **biased and ad-hoc, potentially hindering the development of community**. Our specific concerns are detailed below:

A. Fundamental Misunderstanding of Our Approach

Reviewer tGwA **repeatedly** mischaracterized our approach as text/LLM-based, despite our clear and consistent indication that our work focuses on a multimodal LMM (Large multimodal model).

B. Unreasonable Expectations Beyond Medical Theory

The reviewer criticized our method for not achieving tasks that are "not visible to the human eye." **Such a request fundamentally contradicts the basis of medical theory and is both unreasonable and perplexing.** AI in pathology is designed to replicate the work of human experts to assist pathologists, not to surpass human diagnostic visibility.

C. Shifting Standards and Misaligned Comparisons

Initially, the reviewer demanded comparisons with models that are **four times larger and trained on 800 times more data.** After we conducted additional experiments demonstrating our method's effectiveness, the reviewer **shifted the focus to criticize our lack of genetic diagnostic capabilities** and minimized the significance of our performance improvements over much larger models.

D. Misrepresentation of Data Sharing and Usage

Despite our open release of data and models, the reviewer unfairly criticized us for not sharing data processing steps and falsely claimed that we only demonstrated how to use open_clip. In reality, the instructions provided clearly guide researchers on how to load our pre-trained model (see the historical version of our GitHub link from two weeks ago: GitHub link).

E. Ever-changing Concerns

Even after we addressed all the reviewer's concerns—including data, models, processing steps, comparisons, and additional experiments—**the reviewer did not adjust their evaluation score. This raises the question of whether the original concerns were genuinely the basis for the clear rejection decision.**

Given the severe bias evident in Reviewer tGwA's evaluation, we respectfully and sincerely request the AC to carefully reconsider the this reviewer's evaluation when making the final decision on our work.

Best regards,

Thank you for your insights. To the best of our knowledge, models like HIPT do not perform mutation prediction, and the literature on these models does not claim that their performance on molecular mutation tasks surpasses that of human experts. If there are specific instances where this is indeed demonstrated, we would be eager to learn about them. Additionally, the paper Campanella et al. 2024 you mentioned also noted that "it may be unknown whether a particular genomic alteration leads to a measurable morphological change visible in H&E stained slides."

Ultimately, it might not be necessary to focus too much on this specific point. Whether as reviewers or authors, our collective goal is to build a better AI community that serves society. No single work can solve all challenges at once; we all stand on the shoulders of giants, making small, incremental improvements that eventually lead to significant breakthroughs. This is our shared mission.

While we may have differing viewpoints today, we appreciate your feedback because we believe that discussions like these are an essential part of the journey towards AI eventually achieving this goal.

7 C: Considered & Coherent

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Tips to help make sure your communications are considered and coherent:

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Tips to help make sure your communications are considered and coherent:

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Besides,

- Each communication you issue is coherent within itself
- You should also ensure consistency of message when delivering multiple communications.

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- but should always try to help YOUR research (unless disappointed)!

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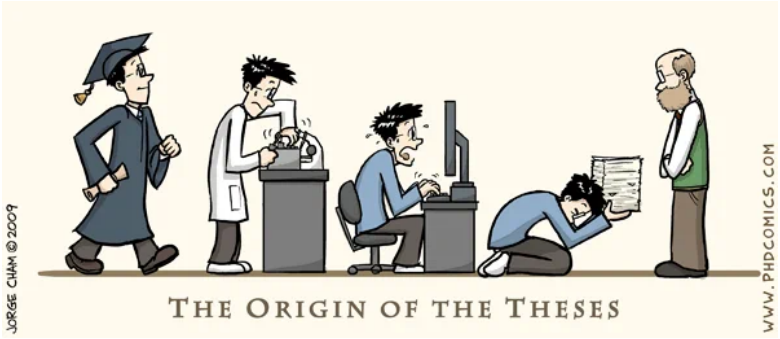

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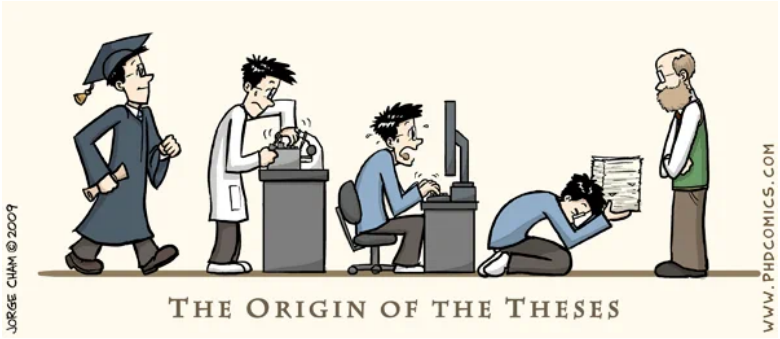

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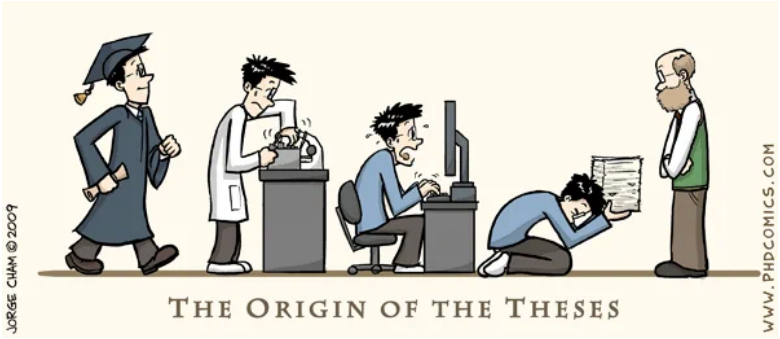
✓ In & Out: You get frequent and valuable guidance.



How to work with your advisor effectively: show your work

How do you get the best guidance from your advisor?

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Describe

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- and the interpretations of the results you got.

How to work with your advisor effectively: Don't try figuring everything out yourself

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- please reach out to your peers/mentors.
- Asking for help is not a sign of weakness.

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- Send frequent and concise updates along the way.

How to work with your advisor effectively: Manage meetings

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How to work with your advisor effectively: Manage meetings

- **Before** (at least x min): send results and agenda whenever they are available.
  - Give your mentors time to digest them.
  - Manage the meeting to ensure you cover all the topics you want to discuss.
- **In the meeting**: progress update. Reserve the last x minutes to discuss the next steps.

How to work with your advisor effectively: Manage meetings

- **Before** (at least x min): send results and agenda whenever they are available.
  - Give your mentors time to digest them.
  - Manage the meeting to ensure you cover all the topics you want to discuss.
- **In the meeting**: progress update. Reserve the last x minutes to discuss the next steps.
- **After**: Send a summary and an actionable plan to keep everyone on the same page.

How to work with your advisor effectively: Do not avoid meetings

When you make less progress or get stuck somewhere, it feels right to cancel the meeting as you have nothing to report.

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- NO!
- That's a TERRIBLE idea!
- Discuss the problems with your mentors/collaborators.
- Help them help you get unstuck.

How to work with your advisor effectively: One single slide deck

- Put ALL the progress/results/figures/discussions in one single slide deck.

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- Put ALL the progress/results/figures/discussions in one single slide deck.
- This saves 5 mins in the meeting locating files and trying to retrieve results two weeks ago when someone asks for it.

How to work with your advisor: Communicate at the right level of abstraction

Facts:

- Your mentors are not going to know all the latest and greatest papers/tools/tricks nor the low-level details.

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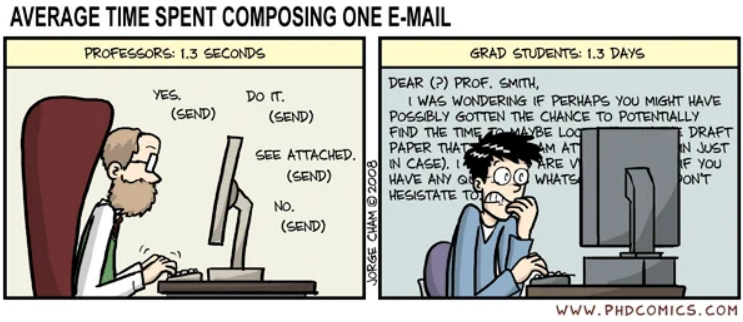

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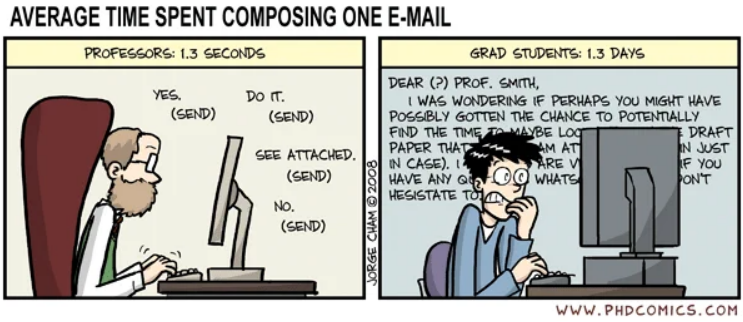
Keep your advisor engaged and excited about your research.



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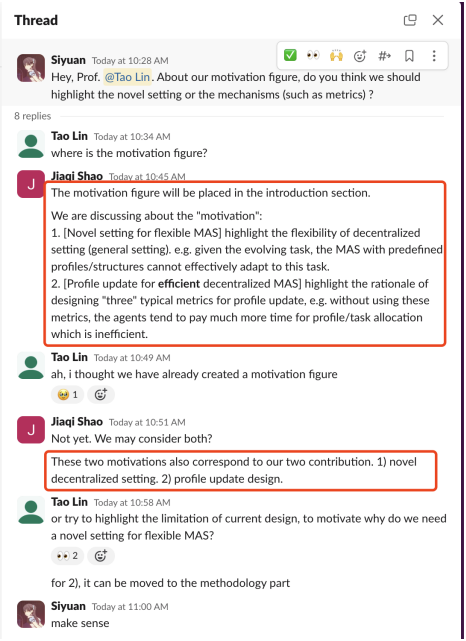
Thread
Siyuan Today at 10:28 AM
Hey, Prof. @Tao Lin. About our motivation figure, do you think we should highlight the novel setting or the mechanisms (such as metrics) ?
8 replies
Tao Lin Today at 10:34 AM
where is the motivation figure?
Jiaqi Shao Today at 10:45 AM
The motivation figure will be placed in the introduction section.
We are discussing about the "motivation":
1. [Novel setting for flexible MAS] highlight the flexibility of decentralized setting (general setting). e.g. given the evolving task, the MAS with predefined profiles/structures cannot effectively adapt to this task.
2. [Profile update for efficient decentralized MAS] highlight the rationale of designing "three" typical metrics for profile update, e.g. without using these metrics, the agents tend to pay much more time for profile/task allocation which is inefficient.
Tao Lin Today at 10:49 AM
ah, i thought we have already created a motivation figure
1
Jiaqi Shao Today at 10:51 AM
Not yet. We may consider both?
These two motivations also correspond to our two contribution. 1) novel decentralized setting. 2) profile update design.
Tao Lin Today at 10:58 AM
or try to highlight the limitation of current design, to motivate why do we need a novel setting for flexible MAS?
2
for 2), it can be moved to the methodology part
Siyuan Today at 11:00 AM
make sense

How to work with your advisor: Asynchrounous communication II

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  - ✓ Send a clear meeting agenda with allocated time.

Table of Contents

Throughout your research project, 99% of the time your approach DOESN'T WORK (yet)

How could we share these "failed results"
and have productive conversations with your mentors/collaborators?

How to share progress

- Design: Why do we want to do this experiment?
- Hypothesis: What do we expect to see?
- Observation: What did we see?
- Interpretation: Is this expected/working? (please no “It doesn’t work.”)
- Visualization: Any better ways to see the results?
- Actionable next steps: What steps would you take?
- Actionable next steps: Stick with the plan.

How to share progress (Design: Why do we want to do this experiment?)

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- This will provide the context for them to help interpret the results and steer the direction of your research.

How to share progress (Hypothesis: What do we expect to see?)

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- comment on what should have happened (if everything is correct)?

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- Describe HOW it fails (with details and ideally in a self-contained manner).

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  - Next, I will design experiments to isolate the step Z.

How to share progress (Visualization: Any better ways to see the results?)

Seeing the results with a good visualization helps

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- If you think the plan should be revised, TALK to your mentors and CONVINCE them.

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  - Ask your advisor if you can continue collaboration with them.

- Try ad hoc meetings
  - Try to find a few minutes to meet with your advisor after their class or during office hours
  - Be prepared, concise, and respectful of their time.

- Make them excited about your work
  - Share frequent updates on your progress or exciting findings.
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- Explore different advisors or co-advisors?
  - If working with your current advisor is consistently challenging, consider exploring other advisors who align better with your research interests.

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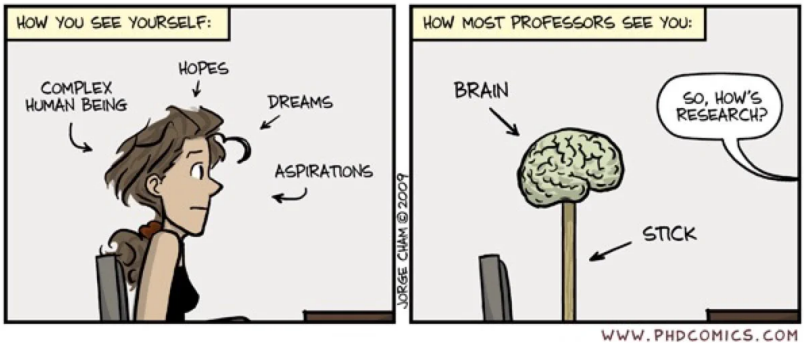
Check out below for some similar tips.

Pre-process your input



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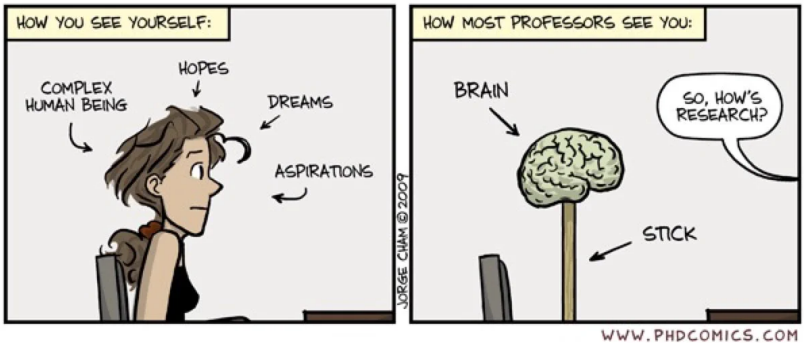

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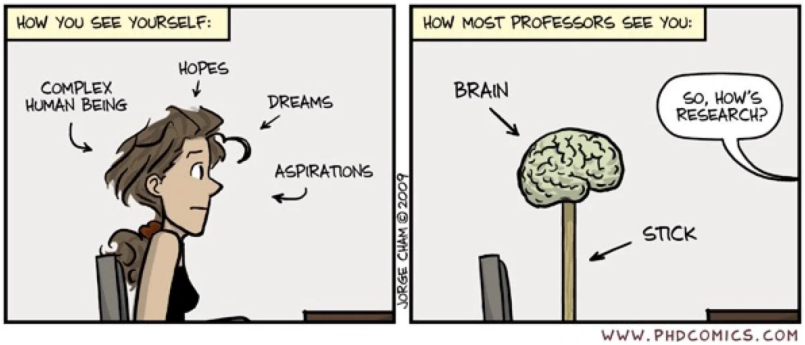
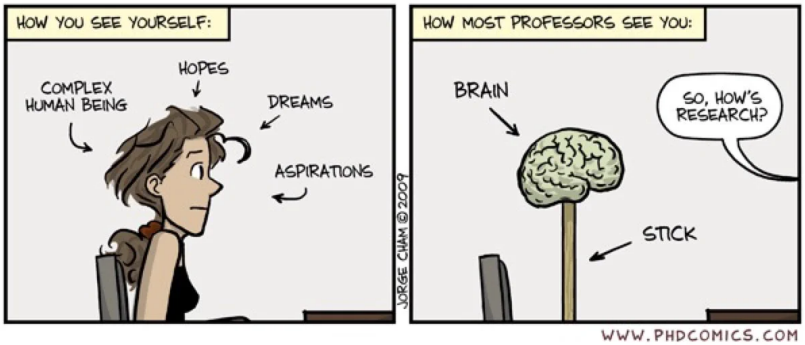


Pre-process your input

- Your advisor is an INPUT-OUTPUT machine.
- Senior professors won't keep track of all the latest papers. But they sure know the fundamentals.
- Pre-process/abstract/simplify your work so that they can give you great feedback.



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- Senior professors may have deep insights to your research problem. But, they don't have the modern toolboxes you are familiar with.
- Instead of taking their suggestions as is (e.g., implement some heuristics), map them into modern frameworks.

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You will learn valuable skills from them!

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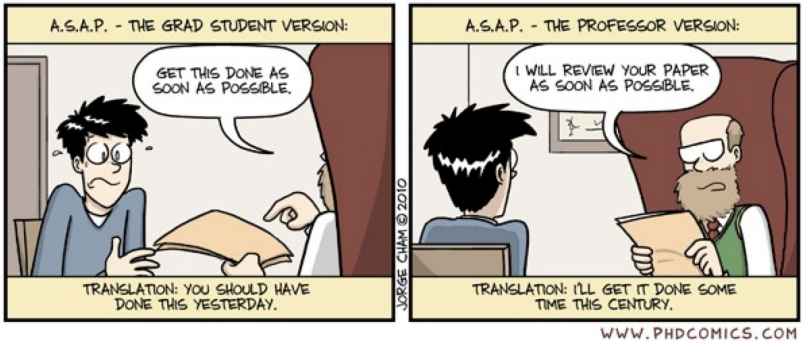

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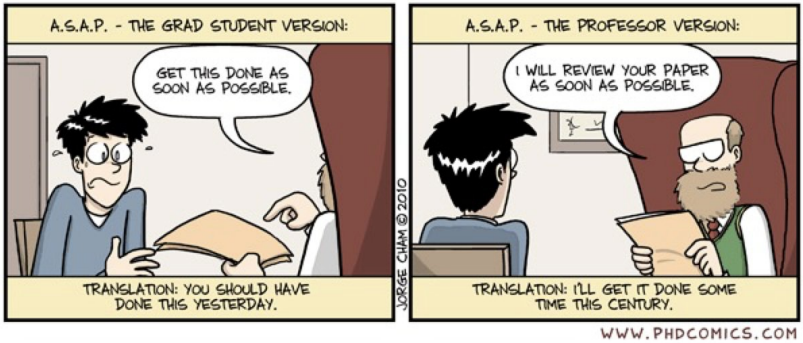

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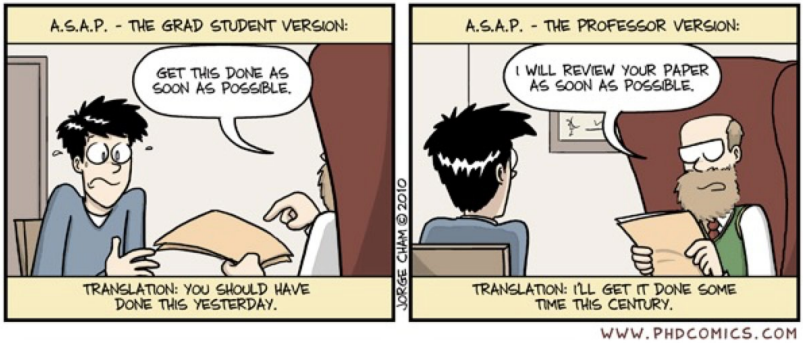

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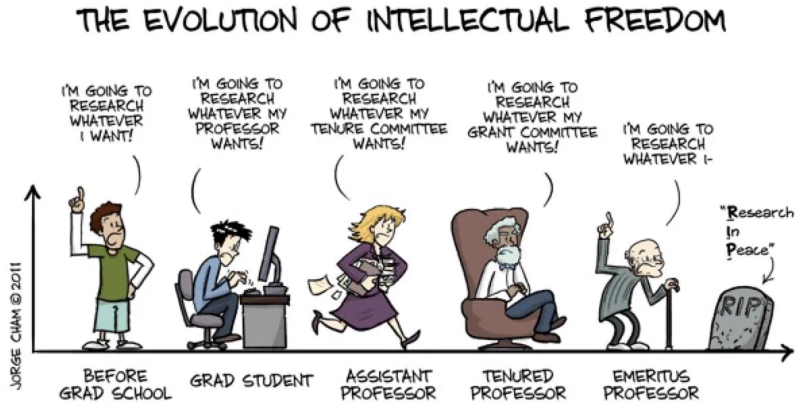
Share progress early and frequently

- Many students feel intimidated about sharing results that are “not ready”.
- It often leads to a vicious cycle of “not ready” -> “no feedback” -> “build up more stress”.
- Break that cycle and keep engaging with your advisor.

Emphasize it again!

Explore common interests

Senior professors don't have tenure pressure and may be open to various explorations.



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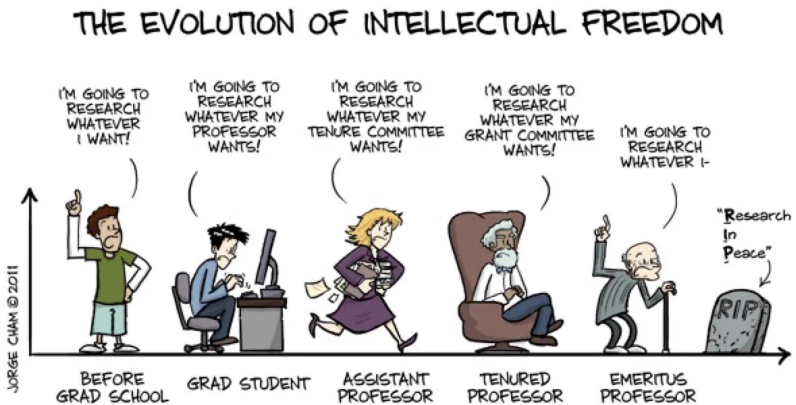
Work closely with your advisor to find common interests
$\Longrightarrow$ so that they can provide their best support.



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- Try to find an answer by searching the Web.
- Try to find an answer by reading the manual.
- Try to find an answer by reading a FAQ.
- Try to find an answer by inspection or experimentation.
- Try to find an answer by asking a skilled friend.
- If you're a programmer, try to find an answer by reading the source code.

Establish that you're not being a lazy sponge and wasting people's time.

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- cross-post to too many different newsgroups
- post a personal e-mail to somebody who is neither an acquaintance of yours nor personally responsible for solving your problem

Search, and then ask on

Sites to ask questions

- StackOverflow
- MathOverflow
- Zhihu
- Reddit
- Zhihu
- Quora
- Mailing list
- forums
- etc

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- *deviation*: it describes the deviation from expected behavior.

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  - Don't use instant messaging shortcuts.

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- Describe any possibly relevant recent changes in your computer or software configuration.
- If at all possible, provide a way to reproduce the problem in a controlled environment.

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Example 2

- **Stupid:**
  I'm getting back-to-back SIG11 errors on kernel compiles, and suspect a hairline crack on one of the motherboard traces. What's the best way to check for those?
- **Smart:**
  My home-built K6/233 on an FIC-PA2007 motherboard (VIA Apollo VP2 chipset) with 256MB Corsair PC133 SDRAM starts getting frequent SIG11 errors about 20 minutes after power-on during the course of kernel compiles, but never in the first 20 minutes. Rebooting doesn't restart the clock, but powering down overnight does. Swapping out all RAM didn't help. The relevant part of a typical compile session log follows.

The raw symptoms of what goes wrong
indeed are better than your interpretations and theories!

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Presentation skills for computer science!
(next lecture)

Thanks & Question Time!