

PRACTICAL TIPS FOR GIVING AND PREPARING A TALK

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1. PRESENTATION

- It is your job to control the narrative and the flow of the talk. If an audience member asks a question that would take you on a tangent, you should defer the question until the end.
- A talk is a performance (ideally an interactive one), and you want to grab the audience's attention with the first words you say; if you lose them in the first few minutes, they are likely to tune out for the entire talk.
- The purpose of a talk is usually *not* to try to impress your audience (with jargon, theorems, the expanse of your knowledge). Instead, focus on explaining key points and on appearing credible and approachable. (Important caveat: in a job talk, you *do* want your influence your audience to have a positive opinion of your abilities, but any attempt to directly impress risks either backfiring or failing. For the few people in your sub-area, you need to attempt to convey the depth of your contribution; but the rest of the department would really just like to understand your problem, why it is important, and accept hand-waving at the rest.)
- Do NOT go over time!
- Convey to the audience that you are aware of the time and will not go over.
 - Say “in my last few minutes” or “we close with”.
 - If you are finished writing and just want to say something, put down the chalk.
- A talk is not necessarily better if it is ‘high-tech’. The tech doesn’t always work, sometimes the painfully created animations actually confuse the audience, and sometimes it comes across as a gimmick instead of as content.

2. TALK NOTES

- On each page of your talk notes, write the time that the talk is supposed to *end*. In the middle of the talk, it can be easy to mix-up whether you are (for instance) giving a 50 minute talk that starts at 10 past the hour and ends on the hour or starts on the hour and ends at 10 to the hour.
- Include in your notes everything you want to write on the board (if it is a board talk) AND points that you want to emphasize verbally, but that won’t be on the board. Make clear in your notes which is which (e.g., color coding, different font, different location on the page etc.)

- If there are things that you want to have up on the board at the same time, plan in advance how you would do so, and make a note of things that you do not want to erase.
- If there is a diagram or statement that you want revealed in a particular order, number the parts to remember that.
- Try to make the end of your talk in a “choose your own adventure” format. Break the content into self-contained 5 minute chunks and clearly delineate them in your notes.
- Divide your talk into sections and by the start of each section, write approximately what time it should be when you start. Then you will have a sense as you go through the talk whether you are going too fast, too slow, or are on target.
- Make clear in your notes how you will emphasize the key points of your talk.
- Make sure your notation looks different and *sounds* different. You don’t want to say “calligraphic K” unless you need to.

3. CLARIFYING EXPOSITION

- Remember: what is one big idea that you want people to leave your talk with? What is your story? Give them something to take home.
- Remember: the best talks make the audience feel as if *they* are smart.
- Simplify without trivializing. Some specific ways to do so:
 - Consider using a well-chosen example to illustrate a proof, rather than giving full details.
 - Work over \mathbb{Q} instead of an arbitrary number field or global field.
 - Sketch a proof under additional hypotheses that preserve the main structure of the argument but remove some technical details. The modifications needed to remove these hypotheses could be discussed later if important.
- Details should only be provided if they have a purpose (e.g., a similar argument will be made later, illustrates the novelty of your result or limitations of previous results/techniques).
- If you are not providing all the details, make that clear to the audience, so they don’t spend time at their seats trying to figure out why it follows and thereby missing the next things that you say.

4. PRACTICE

- Do it! A lot. Far in advance of your talk so you have time to make changes. Ironically, usually a talk can only look effortless if it is thoughtfully prepared.
- On the other hand, don’t over-rehearse! You’re not a robot, and if it sounds scripted, you risk losing your audience.
- Practice with a peer.
 - Ask them to take a photo of every board and every 5-10 minutes write down the time and what you are saying/writing on the board at that moment.
 - After the talk ask them for general feedback and ask if they can summarize the main points of the talk, or the main points of each board.
 - You can look at the photos afterwards and see if its possible to reconstruct what was happening. If there is a statement written on the board, is it clear whether

it is a conclusion of an argument, an assumption of an argument, something someone else has proved, etc.?

- When you give the talk at the seminar/conference, can ask more senior colleagues for feedback. Choose carefully who to ask! You want to ask someone whose opinion on talks you value, but if you are close to going on the job market, you might want some senior colleagues to view you as peers, not as a mentee.