Tom started the class by saying that the draft of the paper is due a week from Friday. He will grade the paper based on the organization, style, usage, formatting, and overall impression. Tom says that there is absolutely no room for bibliography errors! So if you don’t want to be penalized heavily, take care not to have any in your paper.

Today’s material is taken from Pat Winston, Ian Parberry, Lance Glasser, John Carter, Zobel, Dupré, and of course, Tom. We also refer to materials by David Johnson, Cathy McGeoch, and Bernard Moret.

1 Types of talks

There are four kinds of talks:

1. The poster talk, which is around 10 minutes.
2. The conference talk, which is around 20–30 minutes.
3. The colloquium/seminar talk, which is around 45–60 minutes.
4. The job talk, which is also about around 45–60 minutes.

1.1 The poster-length talk

This is the second-hardest talk to give (first being the job talk). Tom has a rule of thumb as to how we perceive the talk when you’re the speaker vs. when you’re the listener. He thus gives the Theory of Relativity for talks:

When you’re giving a talk, 10 minutes feels like 4 minutes
When you’re listening to a talk, 10 minutes feels like 25 minutes.

Hence, in a poster-length talk, strive for nothing more than conveying the problem statement and the results. Try to get your point(s) across in 6–8 slides, at most. If you’re an experienced speaker, you can maybe pull off 10 slides, but everyone would know you’re pushing it.

1.2 The conference talk

The goal of the conference talk is to entice people to read your paper. Zobel says that a talk is not a sales pitch. Tom disagrees. Essentially, you are giving a sales pitch to your audience about your research, so that they would be convinced that it is interesting enough to spend their time reading about it.

In a conference talk, given the time limit, you can present your present the problem, its context, the results, and one or two key ideas. You most likely will not have time for details.
1.3 The colloquium/seminar talk

This is a slightly expanded conference talk, with some additional details. You will, however, not have time for including all the details, so plan accordingly—prioritize what points you want to convey to your audience in your talk.

1.4 The job talk

This is perhaps the hardest talk to give, because the audience will judge you, in part, based on your talk alone. A bad talk can definitely hurt your chances of getting the job.

The job talk is the hardest, because you have to convey so much apart from just your research in that one talk! If you look at the following goals, you will get an idea of what you need to convey apart from just your past work/research:

In a job talk, you need to convince your audience that

- Your work is interesting.
- Your work is deep.
- Your work is fundable.
- You know what you’re doing.
- There is plenty of follow-on work, so that you’ll have projects to work on when you start working there.
- You’ll be a good teacher (at the places that care about teaching).
- You’ll be a good colleague.
- People will want to be around you.
- You’ll be an asset to the institution when you give talks as a member of the department.

The not-so-great part about the job talk is that you will receive little to no feedback, and hence you cannot, for example, correct your errors and/or improve upon aspects of it in your next job talk.

2 Preparing your talk: Content, visual and verbal aspects

2.1 Content

You should bear in mind that some people absorb content better when they see it, and others when they hear it. So your talk should take these aspects into consideration—your slides and oral presentation should both be given equal importance; don’t be biased one way or the other.

Zobel suggests choosing one main goal, and then choosing the points that lead to that goal. For this, and also your talk in general, he suggests what he calls uncritical brainstorming and critical selection. First, jot down every detail you think you’d want to tell the audience—don’t judge the importance of these points; just think that you are conversing about your research, and let it flow. This is uncritical brainstorming. Then, pick the important points that you think the audience needs to know, and order them to make sense in your talk—in other words, this is where you critically select from your pool of brainstormed points.
Dupré suggests using examples liberally, and to make them as simple as possible. She also suggests not to give handouts at the beginning of the talk—the audience would be too distracted perusing them and might not pay enough attention to you. You can, however, give them handouts at the beginning if there is material you want them to examine but can’t project during your talk. Otherwise, it is best to give the audience the handouts at the end of the talk, e.g., if you want them to walk away with some takeaways from your talk. Either way, she suggests that you refrain from giving handouts in the middle of the talk—this is too distracting.

Zobel suggests avoiding details that might be too complicated for the audience. If the audience finds something difficult to follow, they might just give up and lose interest in the talk. In other words, avoid complicated detail that is not necessary to understand the overall result(s).

Zobel also suggests not hiding limitations and shortcomings of your research. This would save you time in Q&A, and it’s better to be forthcoming anyway; prevents the audience from wondering what else you might have missed in your research.

Don’t have too much material for your talk. You don’t want to rush through the end of the talk or cut it in real time. Also don’t go over your allotted time—it is disrespectful to your audience, and says you have no regard for its time.

As you’re organizing your talk, give guideposts. A simple way to do this can be showing the audience an outline and highlighting specific parts of that outline as you shift to a new topic in the outline.

2.2 Visual aspects

Prepare in advance. Tom gives himself at least a week to prepare his talk and slides. If you made the slides the previous night and are winging the talk, the audience usually notices it. It also gives the audience the message that you don’t care.

As a rule of thumb, give 1.5–2 minutes per slide. Tom usually aims for 15 to 20 slides for conference talk, and 25–35 for colloquium talks. Of course, this is just a guideline, and the actual number of slides depends on how long you linger on each in your talk.

Storyboard your talk. Take a paper, lay it out on landscape mode, divide it into quadrants (which maintains the aspect ratio), and sketch out the slides. Storyboarding allows you to see the entire talk at once, before you go into the actual making of the slides. Doing this saves you time. Your storyboard can look like the one depicted in Figure 1.

Zobel (and others) suggest not using dark backgrounds, because in a dark room, a dark background makes the room feel darker, potentially putting your audience to sleep. Also, light fonts on dark backgrounds don’t display as well as dark fonts on light backgrounds. Tom sometimes breaks this rule, so use your judgment if you want to go for light fonts on dark background. A background of variable darkness will never work, as there is no single font color that works for the whole thing.

Use large type fonts. An easy rule of thumb is to stand 10 feet from your laptop and see whether you can make out the letters. Tom suggests 18–24 point font sizes. Use the shrink to fit option in Powerpoint with caution! If you think your type is too small, it probably is.

Treat each slide as a paragraph. The title is analogous to a topic sentence, and each slide should convey one idea.

Favor pictures over words, but don’t copy figures directly from your paper. They won’t look good when you project them in a talk. Redraw your figures for the purpose of your talk.

Use the right amount of words, and use enough verbs. Full sentences are okay, full paragraphs are not.
Figure 1: Storyboarding your talk.

Use color to teach, not to show off. Color should have some meaning. Don’t use similar colors to mean different things (also, don’t jaywalk in Pasadena).

Don’t animate unless it’s relevant and/or necessary.

Zobel recommends against point-at-a-time display. You’ll have to remember to reveal each point, and you rob your audience of being able to read ahead, which they’ll want to do.

2.3 Verbal aspects

Know exactly what you want to say at all times. Use your slides to remind you. Mention everything that’s on your slides; don’t decide at talk time as to what you’re going to say! Prepare in advance, but don’t write out your entire talk. Your talk should feel spontaneous, even though it isn’t.

Turn on your filters—for um, okay, etc. (For example, Tom realizes he says okay too much.)

Practice with your slides. The first time, do it in an empty room. You will realize how often you don’t know what to say. You will most certainly find bugs in your slides. Time your talk. Zobel recommends that you do all practice talks while standing. Tom usually does his first one in an empty room while sitting at the computer. That way, if he realizes that he wants to change a slide while giving the practice talk, he can do it immediately. He makes sure to stop and then resume the clock.

The second time, do it in an empty room again. Work out the bugs from your first one. You will realize that you are more comfortable with the talk, and there are fewer moments of hesitation.

Repeat until you’re comfortable with your talk, then at least do one practice with a live audience. A live audience will force you to interact with the audience, can give you feedback, count your ums, or whatever
verbal tick you need to keep in check.

- Rinse and repeat, until you’re comfortable with a live audience.
- It’s okay to be a little nervous—Tom is too, but he tries to get into the moment as he gets along.
- Make sure you know how to run the presentation on your laptop. Tom also likes to use a remote, so he is not tied to the laptop.
- If the paper you’re talking about has multiple authors, make sure people know which one you are.
- If there’s a session chair who is trying to keep your talk within its time limit, make sure to look over at the session chair every now and then. He or she will flash signs indicating how much time you have left. Always acknowledge that you’ve seen the signs by nodding while looking at the session chair. Best is to keep the nod slight, enough that the session chair sees it, but subtle enough that the audience might not even notice.
- Zobel suggests speaking a little slower than you would in normal conversation. Slightly overemphasize consonants, which helps the 10% or so with hearing problems. Keep your head up. Face the audience.
- Dupré suggests not to hide the front of your body. Step out from behind the lectern. Don’t block the screen.
- Dupré also suggests using your hands thoughtfully. “Do not ball your hands into fists in your pockets; if you want to use your pockets at all, use only one at a time, and never fiddle with the contents. If gesturing is not coming easily because you are tense, gesture with one hand at a time. In general, you should neither hold your hands close to your body (signaling tension) nor throw them wide (like a politician).” Tom thinks that you should practice talking with your hands relaxed at your sides. It feels uncomfortable, but it actually looks okay.
- When referring to the screen, Zobel suggests using a stick or laser pointer and not the cursor.
- Be tactful while handling a heckler. Don’t let the heckler get under your skin. Offer to talk with him or her afterward.
- During question time, Zobel suggests repeating each question. (The audience might not have heard it, or you might have misheard it, and repeating gives the questioner an opportunity to correct you.) He also suggests that while replying, address the audience as a whole. If you do not know something, it is better not to bluff—you risk looking stupid if you do. Of course, be polite to the audience and treat all questions (even ridiculous ones) respectfully.

### 2.4 Other important/useful aspects

Here are some of the most important points to keep in mind while giving a talk (some of the following is directly taken from Tom’s lecture notes).

- According to Glasser, your meta-goal should be to convey technical information and to convince your audience of the validity and value of your results. Your goals should not be to show people how clever you are, to make a social statement, or to attack someone.
- Get the important points up front. Each listener comes in with a certain amount of attention capital. It’s spent as the talk progresses. The rate varies according to the listener and the speaker. Get the important points in while there’s still some capital left.
- Repeat key ideas during the talk. At any moment, at least 20% of the audience is not paying attention to what you’re saying. Don’t assume that everyone has heard everything you’ve said. Repeating key ideas also underscores that they are the key ideas.
- Motivate the audience to care about your work, but don’t fall into the trap of spending too much time on motivation.
Have a presence. Take command of your audience. Be confident but not cocky. Enjoy yourself, and show that you’re having a good time. Like it or not, you are giving a performance. Audiences feel better about performances in which the performers are clearly enjoying themselves. (As long as it’s not at the audience’s expense, or beyond the ability of the audience to understand why.)

Do not try too hard to be funny, unless you really are funny. If you’re not funny and you try to be, you’ll turn off the audience. It will also make them wonder whether you’re technically competent, if you have to rely on lame humor.

Zobel suggests varying what you are doing. Move around a bit. Make frequent eye contact with the audience. Focus on friendly faces.

Let your personality come through. Nobody wants to hear a talk from an automaton. Don’t act like your advisor, Tom, or anyone else. Be yourself.

Reacting to personality is a very human thing. Give your audience the opportunity to do so. A talk with personality will be more memorable.

Zobel suggests avoiding swagger or vanity—that’s even worse in a talk than it is in a paper.