

How to Give a Technical Presentation in Computer Science

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What this Lecture is About

- Giving research seminars (45 mins - 1 hour)
- Giving conference talks (20 - 30 mins)
- Many (but not all) principles will apply to any kind of presentation
- Assume the presentation will be slide based

What this Lecture is Not About

- This lecture is not about how to lecture or teach
- In a lecture the focus should be on helping students learn
- The motivations for lecturing and giving research presentations are different (although with significant overlap)
- I am assuming this talk is more of a lecture

Approach

- I have tried not be too prescriptive
 - speak clearly, don't rattle keys in your pockets, talk to the audience, . . .
- Point of today is to get you *thinking* about your presentations
- Giving good presentations is difficult

One Key Message

- Preparation and practice (don't "wing it")
- Think about what you will say on each slide
- Think about what the audience knows (at each slide)
- Think about how to start and end the presentation
- Get the timing right
- Start the preparation early

Overview

- Structure/Style/Content
 - what's on the slides
 - style of slides
 - the first slide (how to start the talk)
 - overall structure of the talk
 - how much do the audience know?
 - ...
- Giving the talk - the speaker perspective
 - where to stand
 - use of laser pointers
 - audience interaction
 - ...

The Opening Slide

- Talk contents?*
- Acknowledgements?†

*talk 1
†talk 2
‡my talk

The Opening Slide

- Talk contents?*
- Acknowledgements?†
- Consider setting up the talk *content* first
- Element of surprise immediately engages the audience‡

*talk 1

†talk 2

‡my talk

What to Put on Each Slide

- Not too much*

*talk 3
†my talk
‡talk 5

What to Put on Each Slide

- Not too much*
- Examples are good
- Pictures/diagrams are good
- What about bullets?†
 - remind the speaker what needs to be said
 - provides the audience with some orientation and “scaffolding”
 - bullets don't need to be full sentences

*talk 3

†my talk

‡talk 5

What to Put on Each Slide

- Not too much*
- Examples are good
- Pictures/diagrams are good
- What about bullets?†
 - remind the speaker what needs to be said
 - provides the audience with some orientation and “scaffolding”
 - bullets don't need to be full sentences
 - don't overdo the revealing of bullets‡

*talk 3

†my talk

‡talk 5

How Many Slides?

- Depends on what/how much is on each slide
- I usually have around 1 slide/minute (with plenty of animation)
- **Don't rely on judgement:** practice the talk
- It's (potentially) annoying when speakers start skipping slides

Slide Style

- Keep it simple
- Judicious use of colour is good
- Judicious use of animation is good*
- Please don't be the person who's just discovered Powerpoint†

*talk 6

†talk 8

Talk Structure

- Telling a story (much like a thesis or paper)
- Think about what story this particular audience would like to hear
- What does the audience know at each point in the talk?

Talk Structure

- A recent talk at King's Philosophy Department:*
- set the scene immediately with an example (Google search)
- give some high-level motivation for the research
- a bit of advertising and then the talk outline
- now introduce distributional techniques for lexical semantics
- now a little bit of syntax (necessary for the remainder)
- now the main semantics section
- now an example demonstrating the key idea of the talk
- finish with what we're planning to do in the future

*my talk

Talk Content

- How high-level?
- Personally I like some technical content in talks
- How much “advertising” to include?*

*talk 9

Timing

- I've heard the argument that it's not worth having the timing worked out, because unexpected things can happen
- This is a poor argument, for a number of reasons:
 - unexpected things don't happen during talks (earthquake? fire?)
 - if major events do happen (fire alarm) there's nothing you can do
 - if minor events happen (e.g. lots of questioning) it's easier to adjust knowing how long the talk is
 - and it's okay to ask for questions at the end

Practice and Preparation

- I will start a new talk at least a week in advance
- I like to have a few days with it “ticking over” in my head
- I will run through the talk start to finish at least once
 - helps to get timing right
 - identifies problematic slides and bullets
 - ensures a smooth delivery on the day
 - **gives me confidence** that I'll give a good talk
- But note I only *memorize* a few lines (e.g. the opening ones)

Some Golden Rules

- Speak to the audience
- Don't just read from the slides

Don't Apologise

- Certainly not at the beginning of the talk for being jet-lagged, out on the beers the night before, or whatever
- And don't apologise for the work (a different sort of apology)
- What is the apology intended to achieve?

Audience Interaction

- Difficult to get right
- No “geeing-up” of the audience
- Less serious, but not worth it:
 - keeping the audience from coffee
 - the killer slot after lunch

Asking Questions

- Beware asking questions like:
 - is this diagram too small?
 - can you hear me at the back?
- I never ask questions to gauge how much the audience knows (“who knows what a partially ordered monoid is?”)
 - to me this is another indicator of lack of thought and preparation
- I make a judgement about what the audience knows and organise my talk accordingly

Set-up and Positioning

- Make sure the talk is on the relevant computer well in advance
- Make sure you know how to open the file
 - don't be one of those people who starts a talk with "where's F7?"
- Put a back-up on the web, take a USB stick*
- Think about where to stand (relative to audience/screen/laptop)
- I like to stand near the screen and point (if I can)
- Check out the conference room beforehand

*Essex example

Presentation Devices

- Laser pointers okay if used with care
 - but in general I would resist the urge to use one
- Device for flicking between slides okay if used properly
- The mic: ask the techie on hand to attach it, and **then forget about it**

Fiddling

- Remove keys from pockets!
- Remove jumper, roll up sleeves, etc. before the talk starts*

*Brighton example

Nerves

- It's okay to feel nervous (up to a point, and I still do)
- See the adrenaline as a good thing
- Being well-prepared will help you sleep well/feel less nervous

Conclusion

- Enjoy it! - your chance to show off
- You've worked hard - be proud of it (and you've worked hard on the talk preparation)
- Giving talks is difficult and nerve-wracking
- Presentations can be improved a lot with preparation and practice