How to Give a Technical Presentation in Computer Science
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What this talk is about

- Giving conference presentations (20 - 30 minutes)
- Giving departmental seminars (up to 1 hour)
- General principles of how to give a (technical) talk
  - many of the principles will apply to any kind of presentation
- Assume the presentation will be slide-based

What this talk is not about

- This talk is not about how to lecture/teach
  - assumption is that there is a difference between helping students learn and imparting information
  - in particular not all of the principles in this talk apply to this talk

Approach

- I've tried not to be too prescriptive (don't um and ah; don't rattle keys in your pockets; …)
  - but there will be some of that
- Point of the talk 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 (and say it)
  - think about what the audience knows (at each point in the talk)
  - think about how to start and end the talk
  - get the timing right
  - start the preparation early

Overview

- Structure and content; eg:
  - what's on the slides
  - overall structure

- Presentation of slides; eg:
  - style of slides
  - how many bullets on each slide

- Giving the talk - speaker perspective; eg:
  - where to stand
  - use of laser pointers
  - whether to tell jokes

What to put on each slide

- not too much

- bullets serve the following purpose:

What to put on each slide*

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- bullets serve the following purpose:
  - remind the speaker what needs to be said
  - give the audience some orientation
  - let the audience see a point before/**after** it's been said
  - bullets don't need to be full sentences

- examples are good

- diagrams are good

*see toronto and melbourne talks

Number of slides

- Depends on how much is on each slide
- I can manage a slide per minute (with plenty of animation)
- Don't rely on judgement: practice the talk

Talk Structure*

- Telling a story (much like a thesis or paper)

- Set out the problem

- Explain and describe the basic concepts (with the audience in mind)

- Describe the solution

- Give the results of any experiments

- Give a punchy conclusion

*see ACL-04 talk

Opening Slides

- What should the first slide be?

Opening Slides*

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  - talk contents?

*Ed example

Opening Slides

- What should the first slide be?
  - talk contents?

- Might be better to set the talk up first
  - set the scene
  - give some motivation

- Element of surprise immediately engages the audience

Talk Contents*

- Think carefully about what to include in the talk

- Consider the audience

- How much did the audience know at the start?

- Have I told them what they need to know at this point?

- Am I able to tell them what they need to know in the time available?

*ACL-04 example

Timing*

- I've heard people say it's not worth having the timing worked out, because unexpected things can happen

- This is rubbish, for a number of reasons:
  - unexpected things don't happen during talks (earthquake? fire?)
  - if major events do happen (eg fire alarm) there's nothing you can do anyway
  - if minor events happen (eg lots of questioning) it's easier to adjust knowing how long the talk is

*cakes talk example

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- And it's really annoying when speakers go over time
  - especially when the speaker starts zipping through the slides

Practice

- I will run through a conference presentation a number of times

- Helps get the timing right

- Identifies problematic slides

- Ensures a smooth delivery on the day

- But need to balance being practiced with naturalness

Style*

- Keep it simple

- Don't be one of those speakers who's just discovered Powerpoint

*Powerpoint-overkill example

The Speaker - Some Golden Rules

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The important thing is not to stop questioning. Curiosity has its own reason for existing. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvelous structure of reality. It is enough if one tries merely to comprehend a little of this mystery every day. Never lose a holy curiosity. Albert Einstein (according to some quotations website)

The Speaker - Some Golden Rules

- Don't apologize (ever, for anything; well, almost anything)
  - but especially at the beginning of the talk for being under-prepared (or jetlag, or out on the beers night before, etc.)

- Audiences are unsympathetic

- If you've decided to get up there and do the talk, you just have to do it

The Speaker - Some Golden Rules

- Don't apologize for the work

- Grad students often undersell their work

- The audience understand this is work in progress

- **And the work is more interesting than you think**

Interacting with the Audience*

- Audience interaction is tough to get right

- No "geeing-up" of the audience

- Less serious, but annoying:
  - "keeping the audience from coffee"
  - "the killer slot after lunch"

- Asking questions like:
  - is this diagram too small?
  - can you hear me at the back?

*London MT example

Telling Jokes*

- Don't bother

- I can think of two genuinely funny speakers I have heard in the last 10 years (in Computer Science)

- Also beware of little off-the-cuff quips (which rarely come off, and may go horribly wrong)

*ACL Wellington example

Physical Factors

- Think about where to stand
  - relative to audience/screen/laptop
- I like to stand near the screen and point (if I can)

Laser Pointers*

- Don't bother unless you have to

- And if you have to, put the thing down afterwards

*crazy ltn example

Fiddling

- remove keys from pockets!

- remove jumper/roll up sleeves/etc before the talk starts

Reading from Notes

- It's better if you can do without (and good preparation lessens the need)

- But not a disaster if you need notes/small cards

Nerves

- It's okay to feel nervous (up to a point)
- See the adrenaline as a good thing
- Being well prepared will help

Enjoy it!

- Your chance to show off
- You've worked hard - be proud of your work
- You've worked hard on the talk preparation

Charisma

- Not sure this can be taught

- Some speakers are naturally charismatic

- For those of us who aren't born entertainers, preparation can offset lack of star quality

- And remember the purpose of the presentation (it's not to entertain)

Conclusion

- Giving talks is difficult/nerve-wracking

- You can improve your presentations with some preparation and practice