Not
How to Present a Paper

Anders Møller
Computer Science, Aarhus University

August 2019
Caveat Emptor

Do what I (intend to) say – not what I do
The PowerPointers Paradox

• Everything I have to say in this talk is trivial!

• But very few presentations are really good
Why give a good talk?

• Your research results deserve to be known!
• You will get more feedback
• Relevant competences also for teaching, interviews, oral exams...

• You’re from AARHUS UNIVERSITY – make us proud!
Overview

1. What to say (and what not to say)
2. Technical aids
3. Getting through to the audience
4. Concluding and handling questions
Know Thy Enemy!

• Consider what your audience can be expected to know beforehand
  – remind, don’t assume

• A department seminar?
• A small but focused workshop?
• A large, top conference?
• ...

Non-goals

• Explain **all details** of your fantastic work

• Explain the **process** that lead to the results (unless the process *is* the contribution)

• “Wow, that guy/girl is really really clever!”

• “Ha ha, that guy/girl is really really funny!”
Goals

• What do you want people to remember after the talk?

• You have succeeded if
  – they are able to give a 30 sec. summary
  – they will read your paper
  – they will contact you for further discussion

• Use the goal as a starting point for structuring the talk
  – often not the same structure as the paper
  – rarely coinciding with the chronology of the work

“So, does anyone feel like responding to what Richard has just shared with us?”
Do you want to change the minds of the audience or just describe some work you have done?
Drowning in details

Actual slide from presentation at NASA, in request of delaying launch of *Challenger*, 1986
“As you all see [wave hands at screen], by defining bla as bla we obtain bla bla...”
Avoid complete sentences

I have often seen presentations where each page contains one or more complete sentences. This can be very annoying. Especially if the speaker is apparently saying something different. But there are a few situations where it makes sense:

1) Teaching material: If it is important that the slides can be read afterward and there is no supplementary paper or other material.

2) If you want to quote someone – in which case, always slowly read the entire quote for the audience or give them time to read it.

After all, we humans do not yet have dual-core brains.
A good structure (for most research areas)

• Motivation
  – what is the problem?
  – why is it worth solving?
  – why are existing approaches inadequate?

• The Solution
  – intuitive explanation, examples
  – experimental results (if relevant)

• Technicalities
  – formal definitions, theorems, proofs

• Conclusion
The typical structure

• Motivation
  – what is the problem?
  – why is it worth solving?
  – why are existing approaches inadequate?

• The Solution
  – intuitive explanation, examples
  – experimental results (if relevant)

• Technicalities
  – formal definitions, theorems, proofs

• Conclusion
The ideal structure

• Motivation
  – what is the problem?
  – why is it worth solving?
  – why are existing approaches inadequate?

• The Solution
  – intuitive explanation, examples
    – experimental results (if relevant)

• Technicalities
  – formal definitions, theorems, proofs

• Conclusion
From the bag of tricks

The storyboard trick

– prevents getting into details too soon

– helps ensuring that there is not too much on each slide
Use a roadmap slide

• Roadmap / Agenda / Overview / Outline / Plan / ...

• but not for very short talks

• and don’t make it generic:
  “First, I want to introduce the problem, then ..., and finally I will conclude”
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Use The Force!

Bad: Your slides are your presentation

Good: Your slides *support* your presentation
PowerPointless Presentations

• Fonts
• Text size
• Colors
• Placement
• Animations
• Timing
Fonts

• Serif fonts are good for long texts, as in papers and books

• Sans serif fonts are better for short texts!

• Cartoon fonts aren’t funny
Text size

Q: “Can you write larger?”
A: “No, then there is not room for everything I want to write!”

“You probably can’t read this in the back, but...”

Axiom: The presentation screen is small, and the projector is not very bright
USE BIGGER FONTS
In ordinary rooms (not auditoriums), only those on the front row can see the bottom of the screen
Placement

If you have a slide that is brief (which is good)...

...then make the text larger

This is especially relevant for illustrations

(People using \texttt{LATEX} to make slides often forget this)
Itemized text

• Use itemized text
• to structure
  – the contents, not
• as line
• separators
Line breaks

• Always place line breaks to optimize readability

• Example:
  Hackitout Software has a great experience in creating a disaster back-up plan and will provide a suitable solution VS.
  Hackitout Software has a great experience in creating a disaster back-up plan and will provide a suitable solution
Colors

• Use colors, not as paintbox but to
  – highlight important parts
  – emphasize connections
• Be consistent:
  – If green means foo on slide 12 then it should not mean bar on slide 15
• Don’t encode too much in colors
Colors

A dark screen
in a dark room
makes people fall asleep...
Colors

• Colors are often less clear on a projector than on a computer screen

• Classical mistake: yellow on light background
  (Standard comment: “it looked fine on my screen”)

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Illustrations

- Illustrations, figures, graphs, etc. can be extremely effective.
- But never forget to explain what we’re looking at! (e.g. what’s on the x/y-axes)
- Use animations to add parts gradually and to control the focus.
- This possibility is one of the key strengths of oral presentations! (compared to e.g. research papers)
Animations

• Some people HATE animated slides

• I like them :-)  
  – especially for explaining examples and illustrations  
    (which can be difficult in a paper)

• But don’t overdo the effects...
Timing

• Never flash a slide for 0.2 seconds
  – decide whether it is important or not

• Never browse wildly back and forth in the slides
Slide numbers

Always add slide numbers

– *You* know how far you are
– The audience can more easily prepare questions for specific slides
And don’t forget...

spell-check!

(especially for last-minute changes)
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Style matters
“Rhetoric is the art of ruling the minds of men” – Plato

Aristotle (384-322 BC):

• **Ethos** – character, position, reputation, ...

• **Pathos** – emotion, metaphors, amplification, ...

• **Logos** – objective reasoning, math proofs, ...

“The broad masses of a population are more amenable to the appeal of rhetoric than to any other force”  – A. Hitler
The basics

• Breathe, relax
• Water - not sparkling (burb + microphone = not good)
• Speak LOUDLY and **clearly**
  – if there is a microphone, use it
  – no uhm’s
• Look at the audience (as much as possible)
• OK to use a laser pointer (but make sure it’s visible!)
  – never point with your finger at your laptop
To all non-native English speakers

Not good if the audience must spend 98% of the mental CPU power on identifying the phonemes...
Jokes and puns

• Can spice up the show and increase attention

• Can backfire (everybody hates jokes they don’t understand)
  “And then the string said to the integer: Sorry, you’re not my type!”

• Do you want to be remembered as the clown or the rising star?
About gimmicks

Forbidden
– except if you
are Phil Wadler
How to...

• Remember what to say?
  – Slide notes, printed slides / dual screen mode
  – Practice talks – if something is important but you keep forgetting it at the right moment, add it to the slide!
  – Memorize what you want to say for the first slide

• Keep the time? *(never spend too much time!)*
  – Practice talks
  – Be prepared for sections to stretch or squeeze if necessary
  – Don’t ignore signs from the session chair
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The Conclusion

• Briefly summarize the main points
• Indicate the potential for future work (open problems)
• Let this be your final slide
• Saying “Thank you”: A button to start applause
Question time

• Control freaks (yes, you!) fear this part!
• Do:
  – Study related work before the presentation
  – Repeat the questions you get
    - Shows your interpretation of the question
    - Ensures that everybody has heard the question
    - Gives you time to think
• Don’t:
  – Look for your advisor somewhere in the room
Handling difficult questions

• Q: “bla bla bla…. 20 years ago I bla bla bla bla…”
• A: “I’m sorry, what was the question?”
  or “Thank you for the comment”
  or “I believe the question was …” (and then an answer)

• Q: “Isn’t this essentially the same as Schönfinkel’s work on bla?”
• A: “I’m not familiar with that work, but maybe we can discuss it offline”
About bonus slides

• If you can anticipate certain questions
  – but maybe it should have been in the talk then?

• A good place for technical details
  (formal definitions, detailed examples, ...)

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Credits

• Olivier Danvy: *On Presenting a Scientific Talk*
• Ian Parberry: *How to Present a Paper in Theoretical Computer Science: A Speaker’s Guide for Students*
• Jonathan Shewchuk: *Giving an Academic Talk*
• Peter Norvig: *The Gettysburg Powerpoint Presentation*
• Michael Ernst: *How to give a technical presentation*
+ 100s of (good and bad) talks I have seen...