

Seminar

Visual Computing

Summer Term 2020

How to Prepare your Talk and your Write-Up

Michael Wand, July 2020

How to...
...prepare your talk

How to prepare your talk

A few rules and tips for presentations

- General rules
- Structure
- Designing slides

General Rules

Most important question:

- Why am I doing this?
- What is the purpose of this talk?

In our seminar

- Attendees should learn about the topic
- Goal is teaching
- If...
 - ...nobody listens (boring)
 - ...nobody can follow (too complicated to follow)
- ... the whole thing is pointless.

General Rules

Fundamental rule

- Empathy: take audience perspective
 - Can she/he understand this?
 - Background?
 - Would she/he be interested to hear more?
 - Practicing: think about the reception in the audience
- For the audience:
 - Interact with the presenter
 - Ask questions if things are unclear
- The talk is not for the advisor

General Rules

Focus: Present the main points

- Leave out (the right) details
 - Formulas & technicalities need detailed explanation
 - If not necessary: leave out
 - Rather: discuss the underlying idea
- What are the *key* ideas?
 - Explicitly name the main concepts
 - Might not always be in the text explicitly
 - Not every paper is super-well written
- Rule of thumb:
 - People can take away ≤ 3 *key messages* from a talk
 - What are these?

General Rules

Timing

- You have 25 min (max.)
- Finish on time!
 - Being a few minutes to short is ok
 - Do not run over the allocated time
 - Any audience in the world hates excess length of talks
- How to time?
 - Rule of thumb: 1-3 minutes per slide
 - Of course: content dependent
 - Practice! (next slide)

General Rules

Practice your talk!

- Best: with audience
- Less involved: go through it silently and phrase the presentation text
 - Repeat at least 2-3 times
 - Measure time (stop watch)

General Rules

Be critical and objective

- No need to take the paper authors' perspective
- Compare to other topics
 - Cross-links, highlight common ideas, structure
- Present your opinion, but
 - Be serious
 - Make factual, "provable" statements
 - Literature, quotations
 - Formal proofs, analogies, estimations
 - If it is just a guess, or a vague feeling, say it that way
 - Do not overstate

Structure

Typical structure

- Overview
- Introduction
- Technical Aspect #1
- Technical Aspect #2
- ...
- Summary / Conclusions

Structure

Typical structure

- Overview
 - like this slide
- Introduction
 - What is this about? Motivation, short summary
- Technical Aspect #1
- Technical Aspect #2
- ...
 - Give feedback where you are (overview again, section headers...)
- Summary / Conclusions
 - Repeat: What was the main point?

Structure

For complex topics:

- Switch back and forth
 - High-level, bird's eye view
 - Low-level, technical details
- Put things into context
 - Audience must know where you are
- Get back people you have lost
 - Short summaries in between
 - what happened so far?
 - Overview diagrams (Part I, **II**, III)
 - ↑ *we are here!*
 - Some redundancy is ok
 - Don't overdo it

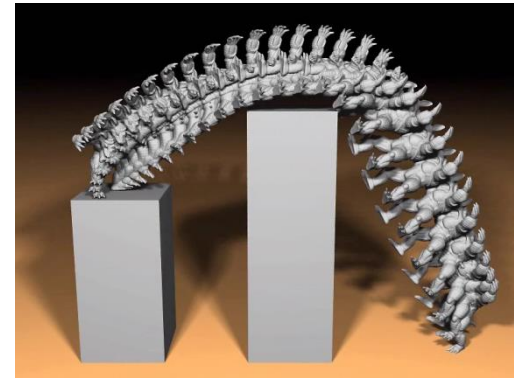
Formal Requirements

Important: Quotations

- Use appropriate citations
 - When you *quote text* from other sources
 - When you use *images*
 - Where the *concepts / ideas* are from
 - For our seminar, e.g.:
put main references on title slide

“to be or not to be”

[Hamlet: Shakespear]



[B. Adams et al., SCA 2008]

Designing Slides

Design rules:

- Not too much text!
- Keywords, not sentences
 - It is often better to use keywords and then discuss the text verbally then writing everything down on your slides. In this case, the audience will start reading the slides and won't listen to you. Hey, are you still listening?
- Rule of thumb:
 - If possible: 7 lines of text or less (best)
 - Otherwise: group your text
 - Large enough fonts: $\geq 26\text{pt}$ (PPT)
- Use visual cues to structure the text

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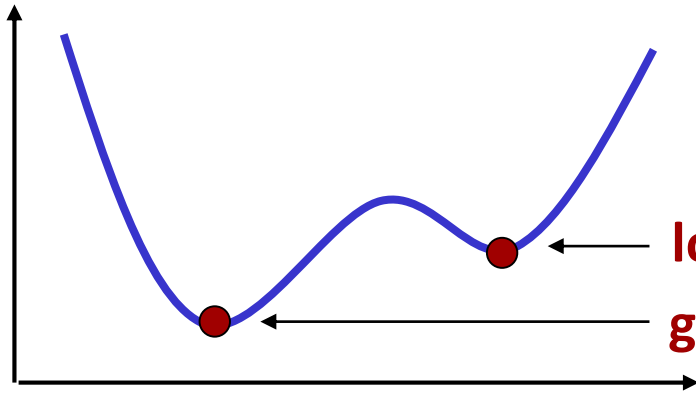
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Images!



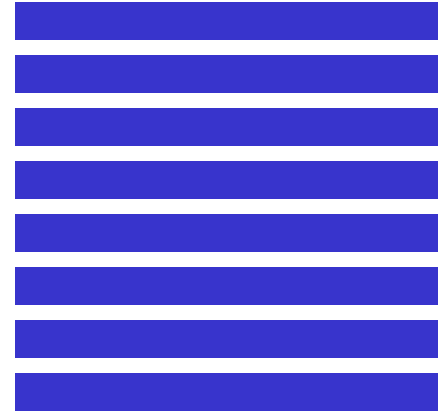
$$f \in C^3, M^{(l)}(f) = \{x \mid f''(x) = 0\}$$

$$M^{(g)}(f) = \inf_{x \in (-\infty, +\infty)} f(x)$$

Use Images!

- Express ideas visually
- An image on every other slide, at least
- Draw images to clarify ideas
 - Rather than using complicated formulas
 - Or lots of text
- In case: formulas & text later (second step)

“Visual Effects”



Visual Grouping

- People can intuitively grasp groups of up to four items

“Visual Effects”

who can read this?

who can read this?

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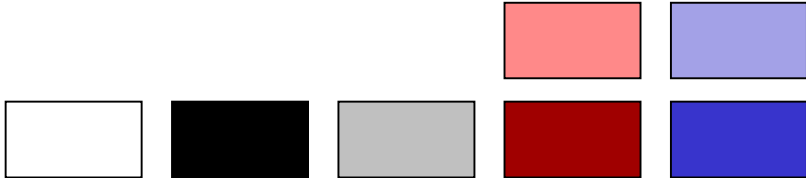
who can read this?

Color Perception

- Not all colors are equal
- Contrast from strong to weak: green, red, blue
- Color difference matters!

Slide Design

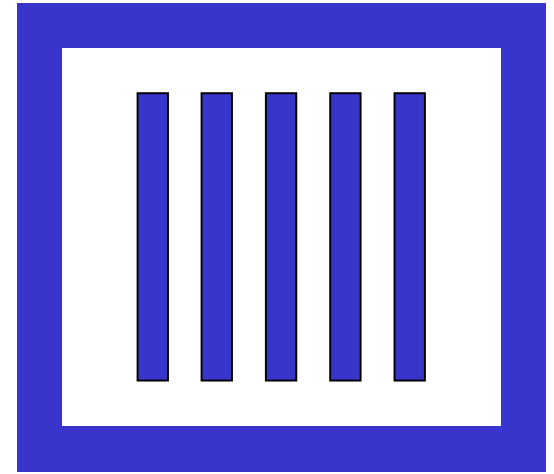
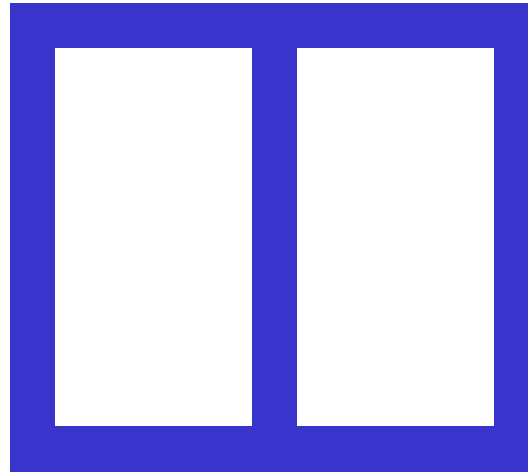
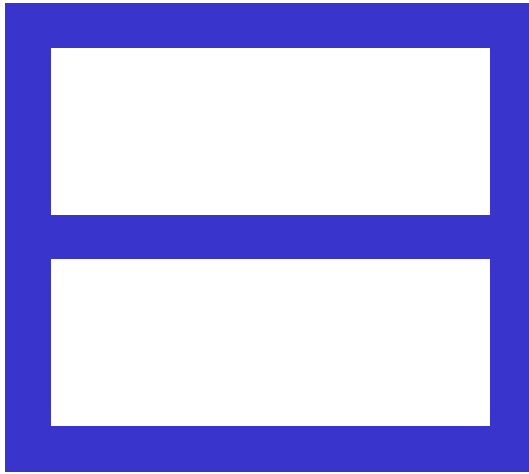
Using color:

- Use color sparingly
- Use color scheme
 - For example, mine: 
- Associate meaning with color, use consistently

Other elements:

- Same for **FONTS**, don't **OVERDO** it
- Use **bold**, *italic* for highlights.
- ***Bold-italic*** is often ugly.
- For slides: Sans-Serif fonts are typically best

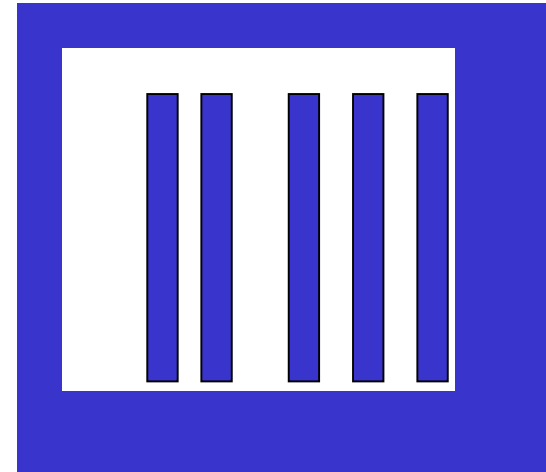
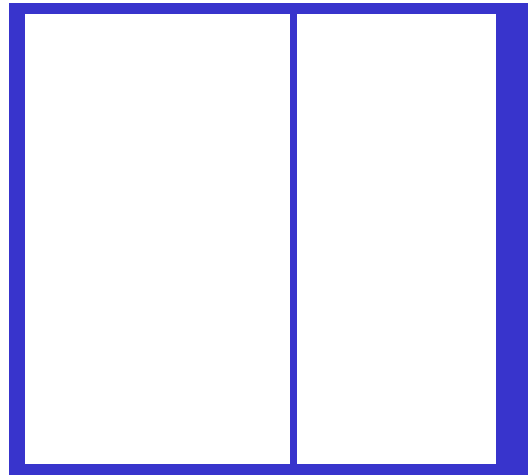
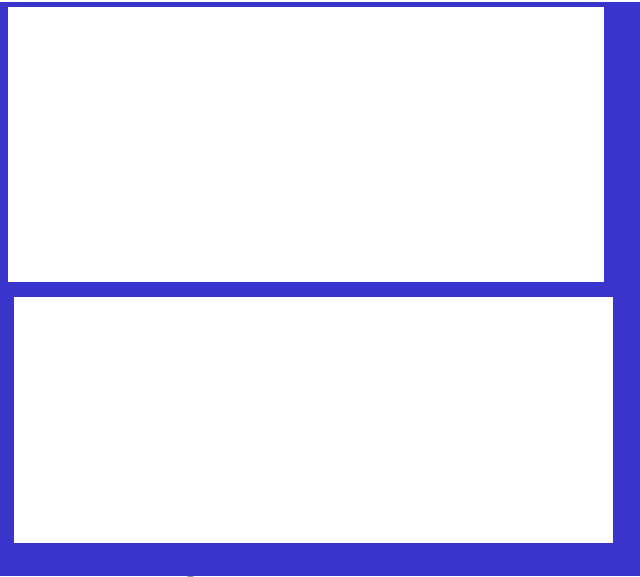
Spacing and Lines



White space is a design element!

- Messing up the spacing often looks ugly
- Use spacing that fits the style of the rest
- Look for symmetries, alignments etc...

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Summary

How to make good slides:

- Keep your audience in mind
 - Design from the audience perspective
- Focus on the main point
 - Main ideas, not formal details
 - Use images
- Make everything look nice

How to...

...prepare your write-up

Write-up Guidelines

Your task

- Summarize the topic
 - papers / parts of papers in *your own words*.
- Assume you would present a new result
 - As an exercise for your *bachelor / master / PhD thesis*
- But: Make clear that this is a summary of results from literature
 - Unambiguously state the sources
 - In the intro “this write-up is based on / a summary of ...”
 - Quotations elsewhere, too

Structure

Structure Guidelines

- Introduction
 - Summarize everything briefly
 - No proofs, no hard facts (“promise for later”)
- [Related Work] ← not in the seminar, but in a B.Sc./M.Sc. / PhD thesis
- Main part
 - Present the paper(s)
- Summary / conclusion
 - Very briefly: main insights, take home messages

References

Important:

- Cite your sources
- Applies to *text* (quotation marks!), *images*, *ideas*, *code*
- References at the end of the text
 - Last section: “References”
 - Citation: [1],[2] or [Miller et al. 1993] (sort alphabetically)
 - Necessary information:
authors, title, where did it appear?, year
 - Additional information:
page numbers, publisher, event/venue, month
- Large parts based on one/two papers:
Write “The following is based on [1,2]...”

Example

Example Text

The technique of sorting numbers in increasing order has been pioneered by [Miller et al. 2002] and has been subsequently improved in the work of [Smith 2003] and [Reeves 2004].

...

References

- [Miller et al. 2002] **James Miller, Agent Smith:** Securing the matrix. In: *Proc. International Symposium on security in cyber worlds*, Zion, 153-157, 2002.
- [Smith 2003] **Agent Smith:** Why the sequels are not that great. In: *Journal of Mediocre Films* 31(4), 153-157, Example Publishers, 2003.
- [Reeves 2004] **Neo K. Reeves:** *Cyberspace is a bitch*. Printers Ltd., 2004.

Now...

...enjoy the seminar!