Presentations

Goal and Scope

Time is limited

- **Limit your scope**: You will not be able to present everything you know
- **Define one clear goal**: What can you reasonably achieve in 15 minutes?
- **Know your audience**: The goal and presentation should be optimized for your audience
- **Pace yourself**: True understanding takes time

Too Much Content

You probably have too much content if you

- **Rush**: You have problems to finish in time
- **Cause confusion**: Your audience does not understand what you mean
- **Cause information overload**: Your audience does not remember or does not want to listen anymore
- **Cover everything you know**

Start

- **Show your scope**: Tell the audience what they can expect from the talk
- **Motivate**:
  - Why is this topic relevant?
  - What problem do we solve?
  - What is new?
  - Why do you care?
- **Contextualize**: What other things exist, how is this different?
- **Spark interest**: Give your audience a reason to want to listen to you

Main Part (1)

- **Tell one story**: Humans are used listening to stories
  - Try to logically connect parts of your talk
- **Logical order**: Structure your talk so the pieces build onto each other
  - Usually this will be different from the chronological order

Main Part (2)

- **Maintain big picture**: It should be clear (to everyone) how each part relates to the main goal of the talk
- **Deep dive**: Go into the interesting details
  - When it contributes to your goal
  - When time allows it
  - When you can make it understandable
  - Examples are very helpful for this
- **Give anchors**: Try to win attention back
  - Nobody is attentive all the time
  - Part of your audience might fail to follow deep dives
  - It should be possible at several points within your talk to follow again
  - Give summaries of challenging parts
  - Make it obvious when one can follow again

End

- **Repeat key points**: Repeat things that everybody should know by the end
- **Highlight implications**: Point audience when their new knowledge is relevant
- **Indicate future work**: Give an outlook of what might come next

Preparation

- **Practice, Practice, Practice**:
  Really!: You will intuitively notice and avoid many mistakes when you practice
- **Record yourself**: To observe your talk from an outside perspective
- **Get the audience perspective**
  1. Find somebody who does not know the topic well
  2. Give the talk to them
  3. They cannot hallucinate missing parts
  4. Ask them what the talk was about
  5. Ask them to repeat the key points from memory
- **Know place and setup**: A great talk can be ruined if you are not there or your setup does not work

Giving the Talk

- **Show interest**: If you show that you care, the audience might as well
- **Speak freely**: Take advantages of live presentations over text or video
- **Face the audience**: Talk to the audience, not the screen or your computer
- **Engage with the audience**: Ask (non-hard) questions, show of hands, ... (if you feel comfortable)
- **Try to avoid**:
  - **Filler words**: A pause is often better than an "uhm"
  - **Fidgeting**: Grab a pen or presenter to occupy your hands
  - **Pacing**: Try to stand on both feet most of the time
  - **Apologizing**: It only draws negative attention and wastes time
    - "I didn't have time to finish this slide"
    - "I am no expert, but this is what I can say"
    - "My computer crashed so I don't have ..."

Handle Questions

- **Answer** if you can
- **Ask for clarification** if needed
- **Repeat** the question for clarification if you are unsure
- **Think** for a few seconds instead of giving a worse answer quickly
- **Admit** if you don't know the answer
  - You can still acknowledge the question
  - Point out why the question is interesting
  - What would one need to do to answer it?
  - Do you know about something similar?

What About the Lecture Slides

- These slides are a horrible example
- We designed them for reference, not only as supplementary material for a talk
- We don't have the time to prepare 90 min lectures as nicely as 15 min talks

Human Focus

Humans can only focus on a single thing well

- Your slides should support your talk, but should not replace it
- Slides do not have to be useful on their own
- Put as few words as possible

Human Ability to Absorb Information

Humans cannot absorb new information very quickly

- Leave enough time for every piece of information to be absorbed
- Plan 1-2 minutes per slide

Readability

- Check font sizes
- Ideally you should be able to easily read everything from the last row
- Test setup ahead of time

References

- Do not spend much time on a "References" slide
- Ideally put them as a footnote on each slide
- Figure sources should also be footnotes on the same slide

Last Slide

- This might be the most important slide of all because it is visible for a long time at the end
- Use it!
  Do not waste it with "Thank You" or "Questions?"
- Give a summary of your talk
- Add visual clues to help the audience remember key parts, for example small versions of figures

Avoid

You should avoid

- **Outline**: People usually do not understand the content
- **Moving animations**: They distract, slow you down, have no upsides
- **Cognitive overload**: Try to identify slides that take time to grasp and improve with:
  - Highlight important things
  - Reveal parts step by step

Tips to Make Good Slides Quickly

- **Plan quickly** create place-holders that you can throw away again
  - Post-it's
  - Ugly slides first, refine later
- **Use as few slides as possible**: Reason about the purpose of every single slide
- **Number your slides**: For orientation of both you and the audience
- **Use a comfortable tool**: Latex might not be worth your time

Further References

- Patrick Winston, **How to speak** [link]
- Elmar Juergens, **How you can predict if your presentation will suck** [link]
- Simon Peyton Jones, **How to give a great research talk** [link]
- Steve Lee (CLIMB), **An Introduction to Oral Scientific Presentations** [link]
- Markus Puschel, **How To Give Strong Technical Presentations** [link]