Why Give Talks in Science?

Why do we give talks/presentations in science

- Paper reading/writing:
  - structured, asynchronous way of communicating in science
  - But understanding a paper also takes effort ($>$ 1 h)
- talks:
  - structured, synchronous form of communication
  - replaces the first end-to-end paper read
  - spark discussions with audience:
    - all are already there, including the expert (you)
    - all are familiar with the content after the talk

"A research talk gives you access to the world's most priceless commodity: the time and attention of other people. Don't waste it!"

What You Need for a Good Talk

All you need for a good presentation

- **The presenter with his voice!**
- Slides that **enrich** the talk with visualizations and simple structures
- Be not afraid to
  - use black-/white-board
  - demonstrate cool/interesting stuff

Don't lose the audience

- Once you have lost the audience it is hard/impossible to regain their attention
- You lose audience if they
  - can not follow you anymore
  - get bored
  - stop listening (e.g., everything you say is on the slides)

Target Audience

- Always adapt your talk for the expected target audience
- background knowledge?
- interests?
- what do you want to get from the audience?

Content and Slides

Structure

- Title slide: title + author
- Outline
- Intro/Motivation:
  - What is the problem/research question
  - why is it important
- if necessary: Background/Existing Approaches
- Key Ideas/Approach
- Evaluation:
  - Is the research question solved?
  - Tradeoffs?
- Optional: Future Work
  - Which questions are still open?
  - What could be explored further?
- Conclusion:
  - Main takeaways, keep it short

Styleguide for Slides

- Disclaimer: this is based on the expectations of your audience/examiner
- General:
  - simple look is good look
  - stick to classic color scheme (e.g., black on white for main text)
  - avoid flashy animations
  - Make sure that everything is readable (even from the last row!)
  - Add slide numbers

A presentation is not a lecture/paper in slides format

- "relaxed format requirements"
- No need for explicit references/citations on slides
- No need for figure/table captions in most cases

Reduce Text

- **Don't write full sentences!**
- Avoid sentence-like bullet points
- Avoid even bullet points if there is an alternative visualization

Examples

- (visual) examples are gold
- helps to get the intuition, get an idea for problems, ...
- keep simple

Reduce content and slides

- Reduce the presentation to the core ideas/insights
- You will often need to kill content
- Keep slides as backup slides (put them after the final slide)

Omit technical details

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- Avoid formulas
- Detailed algorithms

Animations

- make the audience focus more on you
- only reveal parts, once they become relevant
- also useful for images

Presentation Style

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- Speak freely
  - practice/prepare the talk enough!
  - maybe: prepare transcript
- Look towards the audience
- Try to seem excited
- Try to avoid distracting behavior

Interaction with the Audience

- decide if you take questions from the audience during the talk
- is everyone familiar with topics you assume?
- Humor
- Look at faces during the talk.
  - Who is still paying attention?
  - Who looks like he is getting lost now?

Preparation

- make sure you have a backup format that is universally working (PDF)
- If you know the room: check setup before
- clicker?

Further References

- Markus Puschel – How to give good technical presentations.
- Simon Peyton Jones – How to give a great research talk.