How to Make a Good Presentation

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With Every Presentation...

...you present yourself and your work
The Slides

- Typically done long before the presentation
  - Rule of thumb: one slide per minute
- Used to better convey the message
  - Images, Videos, Graphs, Animations etc.
- Not meant to act as a teleprompter
  - Do not read from the slides
Structure of Scientific Presentations

- Introduction and Motivation
- State of the Art
- The Approach
- Results
- Conclusions and Future Work
The Sections
Introduction and Motivation

▪ Describe
  ▪ The problem
  ▪ Why it is relevant
  ▪ The open question
  ▪ How your approach answers this question

Why should people care about your work?
State of the Art

- Mention relevant approaches presented in the past
- How does your approach go beyond the previous ones?
- Crucial to find right balance between praise and criticism
  - Mention what other approaches do and what they solve (be friendly, make the authors happy!)
  - Point out their drawbacks without diminishing their worth
  - Specify in which way your approach is better (do not downplay the work of others!)
The Approach

- Intention:
  - Not to demonstrate your skills
  - To make the audience understand how your approach works
- Provide the technical details and the intuition
- Use graphics and examples to explain technical details
Algorithms are Hard to Explain

Algorithm 1 Coverage(S)

1: $C \leftarrow S$  //Set the current node to S
2: $P_{aux} \leftarrow C$
3: $\mathcal{P} \leftarrow \emptyset$
4: while 1
5:    $\forall n \in P_{aux}, m \in \mathcal{N}, \|c_n - c_m\| < M_R \cdot e_{cell}$
6:        visited($m$) = 1
7:    $\forall n \in P_{aux}, m \in \mathcal{N}, \|c_n - c_m\| \leq (2M_R + 1) \cdot e_{cell}$
8:        overlapped($m$) = 1
9:    $\mathcal{N}_C \leftarrow \{n \in \mathcal{N} | \|c_n - c_C\|_{\infty} = (2M_R + 1) \cdot e_{cell}$
10:       and overlapped($n$) = 0 and $g(n) < \infty\}$
11: if $\mathcal{N}_C \neq \emptyset$
12:    find $M \in \mathcal{N}_C$ with minimal $g$
13: else
14:    $D^*(C)$ and stop at visited($M$) = 0
15:    or $\|c_M - c_o\|_{\infty} = e_{cell}, o \in \mathcal{O}$ and $\exists n,$
16:    visited($n$) = 0, $\|c_M - c_n\| < M_R \cdot e_{cell}$
17: if no such node $M$ exists
18: return $\mathcal{P}$
19: end
20: $P_{aux} \leftarrow P_{aux}(C, M)$
21: $C \leftarrow M$  //Set the new current node
22: $\mathcal{P} \leftarrow \mathcal{P} \cup P_{aux}$
23: end

[Dakulovic et al., IFAC 2011]
Instead...

- Introduce the idea
- Give examples to describe how it works
- Design examples to explain important features of the algorithm

- What the audience should takeaway?
  - Intuition behind your algorithm
  - General idea of how it works
The Results

- Should **back up your claims**
- **Demonstrate** that your approach has the desired **features**
- **Illustrate** that your approach is **better than previous ones**
Conclusions and Future Work

- Describe the contribution of this paper
- A good first sentence starts with “We presented a novel approach to …”
- Highlight the key idea of the work
- Talk about limitations and how they can be addressed in future work
Slide Design

- Use the provided template for your presentations
- Ensure that every slide contains the following:
  - Your name on the bottom left (Left footer)
  - The slide number on the bottom right (Right footer)
  - The name of the paper in between the left and right footers
Text

- Use sans serif fonts instead of serif fonts
- Use
  - dark text on light background (easy to read)
  - light text on dark background (not so easy to read)

Left aligned text is easier to read…
   Than centered text

- Avoid putting too much onto one slide (avoid clutter)
Text Color

- Check readability
- Check readability
- Check readability
- Check readability
- Red and green are hard to distinguish for a large fraction of the population

- Check readability, maybe ask others!
Text Size

- Make sure that everyone can read the text (26Pt)
- Make sure that everyone can read the text (23 Pt)
- Make sure that everyone can read the text (20 Pt)
- Make sure that everyone can read the text (16 Pt)
- Make sure that everyone can read the text (14 Pt)
- Make sure that everyone can read the text (12 Pt)
- Make sure that everyone can read the text (10 Pt)

- The caption should not be smaller than text on the slide
Abbreviations

- Abbreviations reduce the length of the text
- Abbreviations → Use them sparingly!
  - make you appear like an insider
  - while making others feel like outsiders
- Avoid abbreviations (unless they are common)
  - DIY, ASAP, UK, USA → Common abbreviations
  - PQ, SQ, RQ → Uncommon abbreviations
- Especially avoid uncommon abbreviations in titles
Figures

- Prefer **vector graphics** over images
- Grab an image from a paper at the highest resolution
- Zoom into the picture before grabbing it
- If the image is pixelated, **redraw the figure**!
- To check, connect your computer to an LCD monitor and check the quality by going close to the screen
A Low Resolution Figure
Higher Resolution is better!

Probe shaft

Electrode

Probe base with contact pads

Contact to circuitry

40 µm
Plots

- Use colours and patterns that are easy to distinguish
- Order the legend according to the functions
- Make them high resolution
- Create your own plot if needed
Example of a Bad Plot
Example of a Good Plot

![Graph showing time (min) vs memory (GB) for different approaches.]{23}
Animations

- Useful to explain content and illustrate processes
- Not meant to entertain the audience
- Often animations are distracting
  - Use animations sparsely and only where required!
- No need to demonstrate that you know every feature of the presentation tool!
Spell Checking

- Your computer can “spell-check” for you - Use it!
- Set the slide language to the language you are using

Benutzen Sie die Rechtschreibprüfung!
Benutzen Sie die Rechtschreibprüfung!
Consistent Colours & Shapes

- Think about the colours and shapes you intend to use
- Stick with them throughout the presentation
  - If velocity is green in one plot, ensure it is green in other plots!
Other Important Aspects to Consider

- Check your camera and positioning beforehand
  - Be in the centre of the image
  - Make sure you’re well lit, and do not sit against the light
- Be aware of your background
- Check whether videos run smoothly on the conferencing software
- Be familiar with the software: how to share the (correct) screen, enter presentation mode etc.
Your Presentation

- Plan it
- Practice it
- Time it
- Think about how to deal with interrupting questions
- Practice transitions between slides

- Keep in mind: This is your show
- Optimise it!
YOUR CONFERENCE PRESENTATION

HOW YOU PLANNED IT:

INTRODUCE YOURSELF

DESCRIBE OUTLINE OF TALK

MOTIVATION

METHODICITY AND EXPERIMENT DESIGN

RESULTS

CONCLUSIONS

APPLAUSE

ENGINES G&A

15 MINUTES

HOW IT GOES:

PREVIOUS SPEAKER RUNS LATE AND TAKES INTO YOUR TIME.

TECHNICAL DIFFICULTIES: CONNECTING YOUR LAPTOP.

FORGET INTRODUCING YOURSELF.

ANNOYING AUDIENCE MEMBER INTERRUPTS WITH SELF-APPROVING QUESTION.

REALIZE YOU ONLY HAVE 3 MINUTES LEFT.

POWER THROUGH THE REST OF YOUR SLIDES.

15 MINUTES

SPEND WAY TOO MUCH TIME DESCRIBING YOUR OUTLINE.

AWKWARD SILENCE G&A.
Connecting your Laptop

- Check if your laptop works before the talk
- Are the colors OK?
- Are the videos visible on both screens?
- Do not boot your computer in front of the audience (use suspend to RAM)
- Better do not close the lid before connecting your laptop
- Check the entire presentation (esp. videos) when you have to give it on a computer different from yours
The Presentation Mode

- Presentation mode
  - Allows you to view notes for each slide
  - Lets you check where you should be according to the timing
  - Lets you make a proper transition to the next slide
Laser Pointer

- Helps you to **point at things**
- Use the laser pointer instead of the mouse cursor
  - Clearly visible and hard to miss
  - Laser pointer visible from the presentation mode as well
- Not everything needs to be pointed at
### Speaking (1)

- **Speak up** to make sure that everyone can hear you
- Test beforehand to make sure that your microphone picks up what you’re saying
- If not
  - Try disabling the auto-gain feature (auto noise cancellation)
  - Try using a better microphone
Avoid dialect
Avoid idioms
Avoid repetitions (look for alternatives or synonyms if you discover it)
Avoid hesitation vowels like “ahem”, “uh”, “well”, “yes”
You should always look towards the audience while speaking. They are there for you, not for the slides.

It helps to remember the 3 T’s framework:
- Touch (or indicate) the part of the slide you are referring to
- Turn towards the audience. Not just your face, but the entire body
- Talk. Now it’s your time to shine
Think positive!
Questions are good and show that people are interested
Repeat the question to ensure that you understood it properly
If you cannot answer a question, be honest about it
Suggest to take the discussion offline, if the answer would take too long or diverges from the talk
Time Limits

- Test the duration of your presentation beforehand
- Keep a timer running
- If you tend to stumble on phrasing: Slide notes can serve as a crutch
Summary

- A talk is a unique opportunity to present yourself
- Prepare it carefully
- Practice it extensively
- There is no reason to be late with your presentation
- There is no reason not to be prepared
Thank you for your attention!

This slide appears in almost every talk but actually is superfluous
Questions