

Guidelines for the preparation of a scientific presentation

How to start

- Familiarize with the general topic (Laser-plasma interactions and applications). Flash-read through the field, don't go too much into the detail of specific papers yet.
- A good source to start with is of course the internet. Do not hesitate to download a presentation or a PhD-thesis that you stumble across. Often, you will find the abstract and/or the introduction to be quite indicative.
- Understand the motivation and the physical approach of a specific topic.
- Spot points of interest (your own and your audience's).
- Are you interested and will you feel comfortable with this topic?

Developing an idea on your presentation

- You have 30-40 minutes for the presentation. Depending on your presentation style, you will have time for 20-30 slides.
- Sit down with a piece of paper and a pen and imagine your presentation. The success is based on a simple goal: Tell a story! There are a number of thoughts that will help to organize yourself:
 - Introduction and Motivation: Why should the audience bother to listen to you for half an hour? Why are people investing time and money to research on this topic? What is the big picture?
 - Focus on 1-2 technical/physical problems and discuss them in detail. Explain, in the context of your motivation, why those are chosen. Try to focus on the frontiers of your topic.
 - The audience will need to understand these points without being experts. Imagine, how you will guide them to this understanding, starting from a common knowledge basis. Avoid jargon, especially as you are not an expert yet yourself. If some wording is unavoidable, explain it.
 - Be careful in inclusion of data/diagrams. Take your time to understand and explain them.
 - Talk about the (potential) applications of the research topic. What is/will be its impact?
 - Conclude with future challenges and future directions. Where are things going? What will we see in the next years? Do not just repeat what you have read, but form your own opinion and tell it.
 - What is your “take-home message” you want your audience to get from your presentation?
- There will be 20 minute discussion following your presentation, this needs to be prepared as well. This time is a chance for the audience to dig deeper and further their understanding. Don't be afraid to see this also as a chance for YOU to learn more. Think of points for discussion yourself as well.
- As a presenter, you can also ask questions to the audience (and me).

Preparing your presentation

- You have probably noticed that, given the thoughts before, 20-30 slides is not much space and 30 minutes is not much time. You should now also be aware, that the preparation of one slide can take a good hour. The task is not only to copy/paste information from the material you have at hand, but to present the topic as if it was your own research. This needs time!
- You will also notice, that giving the presentation will be much easier if you have carefully prepared your own slides, as you will think of your wording already during preparation. You will also notice that the transitions between the slides and your train of thoughts is smooth. If not, you may have to introduce an extra slide to make it smooth.
- Don't waste your time yet by realizing fancy animations. Form a solid basis first!

Practice, practice, practice

- There is no better way to find weak points in your presentation than practicing it. Speak out loud what you are going to tell while presenting.
- You will find that some of your words could be strengthened by a few bullet points. You may also find too much text on your slides.
- Practicing is the only key to give your presentation the required smoothness. You may even find that one or a view slides are missing or too much. Re-iterate!

Abstract – Announcing your talk

- Sit down and write an abstract. It should contain not more than 3 sentences to announce your talk.
- Send it to me on the Friday before your talk.