Seminar Presentations and Technical Reports

Guidelines

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1 Overview and General Comments

This documents is a collection of guidelines for good seminar presentations and technical reports. It is not a comprehensive guide and should only serve as a starting point for minimal requirements. The web is full of more elaborated guides to good scientific presentations and papers and it is expected to read at least two or three of each of these (just search for "good scientific presentation" or "good scientific paper"). Of course, some of these guides will contradict somehow with each other and with the recommendations given here. It is up to the seminar participant to adopt the guidelines as he or she seems fit but they should be applied in a consistent way. After you have prepared your presentation or written your paper, have another look at this document and those guides and cross-check whether you have followed the recommendations.

In seminars, the only information from where you start both your presentation and the technical report is usually the title and 1–3 references. It is expected that these references are used as a starting point for a literature survey and it is not satisfactory to focus only on material within these references. During the literature survey you should collect at least 10–20 further papers that are relevant for the topic and evaluate their content. If in the end the original references are the best source for your talk and your paper you may focus on those but still have to describe the other related works in the paper.

2 Seminar Presentations

A seminar talk should present some specific area in one own words and it should not be a simple report of someone else's work. In many cases, it is advisable to deviate from the structure of the original literature for the presentation. In particular, as you probably use more than one original paper in your presentation you should try to align notation and background as much as possible in order to have a coherent slide deck.

Mandatory Sections

Every scientific talk, independently of whether it is a conference talk or a student talk, should contain the following sections:

1. **First slide**: the first slide should at least state your name and the title of the presentation. It should also contain the date and the venue (e. g. name of the seminar).
2. **Motivation**: what is the motivation of the work you are going to present in this talk? What problems are addressed? The motivation of a talk should be the given in the first 1–2 slides of the presentation and should even come before a table of contents[1].
3. **Preliminaries**: what does the audience need to know in order to understand your talk? Know you audience and know the topics of the talks that are given before your talk. It is quite boring for the audience if you repeat the same background knowledge as the previous speaker. Try to avoid giving too much and obvious background but also do not expect that the audience knows the background as well as you do.
4. **Main Part**: the main part of your talk may be partitioned into several sections.
5. **Summary**: the last slide of your presentation should always be a summary slide that gives a brief overview on what you talked about. This slide can be used by the audience to remember questions they may have had during your talk but forgotten. A slide containing only "Thank you for your attention" is completely useless. However, you should add a "Thank you" note on your summary slide that you reveal when you have finished your summarization. Then it is also clear for the audience that you have finished your talk.

[1] A table of contents can even be omitted for small talks (10–15 minutes) but a motivation is mandatory

If you have referenced a lot of other people's work in your presentation it is also advisable to have a bibliography slide as a backup. Put it after the summary slide but only reveal it if questions regarding the literature arise.

Miscellaneous recommendations

When preparing your talk and during your presentation please keep in mind the following recommendations

1. A scientific presentation is not simply a paper in presentation style. Do not overload your slides with text but better use simple statements, keywords, and (most importantly) give a lot of examples to illustrate ideas. Use large fonts and split slides into multiple slides if needed.
2. Try to be as informal as possible and focus on conveying the central ideas of the topic to the audience. Sometimes it is necessary to add mathematical definitions and notation in order to explain some needed technicalities, but you should be careful with that.
3. For each slide you should allocate about 3–5 minutes. If you are faster then the audience will not have enough time to understand the topic of the slide. If you are slower then you might bore the audience with your too detailed explanations.
4. Practice your talk at least twice and adjust the content depending on your time limitations. If you have been allocated a 30 minutes talk but are still not finished at 40 minutes, you only show that you have not prepared yourself adequately and will fail the seminar.
5. Speak loud and clear.
6. Do not read the slides aloud and do not read your notes aloud. Your eyes should be at the audience most of the time.
7. Do not stand between your audience and the projection screen.
8. At the beginning of your talk you should make clear whether you accept interposed questions or not. If someone asks a question anyway, be polite and answer it as briefly as possible.
9. When you use LaTeX *beamer* for your presentation and want to hide some parts of a slide do not blur them but hide them completely. Your audience will always try to read want to want to hide from them, this is an unavoidable human reaction. Unfortunately, the blurring is the default setting for many templates in *beamer* but you can disable this by adding the command `\setbeamercovered{transparent=0}` to the preamble.
10. Do not copy+paste images of formulas, tables, or other text elements that can be written by yourself (especially if they are in a different language).

3 Technical Reports

A technical report has the same requirements as any other scientific publication. One of the best guidelines for writing scientific publications is [2]. Everything that is said there also applies to technical reports. Besides that you should also take into account the following recommendations.

Grammar and Spelling

As a student at a university it is expected that you completed some form of higher school education and, hence, that you know how to write correct English and/or German. Too many spelling and grammar mistakes in a technical report are in no way acceptable. Papers that do not conform to standards required by high-school graduates are rejected without review. If you are not a native speaker ask a friend to proof-read your paper and always use automatic spell checkers.

Style and Language

Besides writing *correct* English and/or German it is also expected that you write *good* English and/or German. This means among others that

1. your text should follow a central theme,

2. paragraphs are comprised of a beginning, a main part, and an end,
3. chapters start with an overview and end with a summary and some conclusion,
4. there is always some text between a section title and a subsection title,
5. abbreviations such as RDF (*Resource Description Framework*) are always explained at their first occurrence and marked as such using uppercase letters and possibly a sans-serif font,
6. foreign words are marked as such by e. g. italics („Das Forschungsgebiet *Artificial Intelligence* ist ein Teilbereich der Informatik“),
7. quotes are correctly used (“these are English quotes” and „dies sind deutsche Anführungszeichen“),
8. words such as “which”/“that” and “when”/“if” are used in the correct context,
9. terms such as “don’t”, “wasn’t”, and “can’t” are avoided, use “do not”, “was not”, and “cannot” instead
10. the ampersand “&” is only used in the correct context (in particular, it should not be used for replacing the word “and” as it has a very specific semantics[2])
11. the text is structured appropriately using chapters, sections, subsections, etc.,
12. sentences are neither too simple nor too complicated,
13. examples should be given as often as possible.

Scientific Writing

A technical report or a scientific paper is not a novella. Although you are supposed to present the content in an entertaining way, you should be scientifically accurate and precise. This means among others that

1. you should be objective in your discussions
2. you should *explain* important concepts and approaches and not just *describe* them. For example, the statement “Propositional logic is a formalism for representing logical relationships that allows the inference of new information” is a description. The statement “Propositional logic is defined by two components, a syntax and a semantics. The syntax is built on a signature, a set of atomic propositions, and connectives $\wedge$, $\vee$, $\neg$ that allow the construction of complex formula via the following rules...” is an explanation. You always have to describe what you are talking about and all things that are important for your report have to be explained (also with examples).
3. you should make clear what are your own contributions and what is the work of others (see also section *References* below).

Word processor

It is recommended to use LaTeX [1] for any kind of technical report (at least in the field of computer science). You may also use Microsoft Word or any other word processor but be advised that you cannot avoid learning LaTeX at some point in your studies. If you are using LaTeX for the first time, you should read a couple of beginner’s guides from the web.

References

If you are describing work of other people or make any other form of citation you have to add a reference to this work. Do not use complete sentences from other works without clearly marking them as quotes. For LaTeX users it is strongly advised to use BibTeX for managing references.

Fonts and Markup

For longer texts (>10 pages) it is advisable to use a serif font as it is easier for the human eye to read it. While you may change the font-style between section titles and section content you should not change the font-style within the main text parts (an exception to this rule is the use of abbreviations, see above). Be consistent in the use of bold-face, small-caps, and italics. Bold-face should be used very rarely and underlining should never be used.

[2] `https://en.wikipedia.org/?title=Ampersand#Usage`

4 General Remarks

Here is a list of general remarks valid for both seminar presentations and technical reports

1. Meet the deadlines! If your advisor asks you to submit previous or final versions of presentations or technical reports until a specific deadline then submit this version until this specific deadline. It is very disrespectful to ignore this deadline and submit your presentation or paper later without notice. It is usually not a problem to ask for an extension, but you should always ask before the actual submission deadline.

Literatur

[1] An introduction to LaTeX, 2008. http://latex-project.org.

[2] Simon Peyton Jones. How to write a great research paper, 2013. University of Cambridge videos, http://www.yovisto.com/video/21844.