

Seminar Instructions

The goal of a seminar is to introduce students to the major constituent of scientific method that is concerned with critically reading, understanding, summarizing, explaining and presenting existing scientific papers. Students read one or more papers that are assigned to them by their supervisors; they may find and read further relevant articles in the domain. Understanding the central statements of a paper includes highlighting, complementing and explaining possibly implicit assumptions as well as deliberately or accidentally incomplete chains of argumentation; it typically also includes coming up with own examples.

This understanding is reflected in the written exposé. This exposé shall include the problem that is tackled in the original papers as well as the central assumptions, results, statements and arguments that were identified while reading the original paper. Merely paraphrasing the original paper is not sufficient. Ideally, the exposé contains a section with the student's own assessment in terms of whether the paper is relevant, reasonable, esthetic, complete, sound, etc.

There is no need for students to defend the ideas presented in the paper by all means, neither in the exposé nor in the presentation. Students may be critical! However, do not forget that the original paper was usually written by senior scientists who know their domain, so that politeness, precaution, respect and very clean arguments are indispensable when criticizing.

The subject of the presentation is the problem, the underlying assumptions, and the solution. Three slides ("The Good, the Bad, the Ugly") demonstrate the student's critical reflection of the subject.

A. Structure

The presentation must be clearly structured. A useful template is the following:

1. agenda
2. introduction to the field
3. precise problem statement
4. development of the solution to this problem
5. summary and assessment ("the good, the bad, the ugly," see above)
6. references. It is of course possible to deviate from this structure; the six mentioned topics should, however, have their place in every presentation.

B. From papers to presentations

The following steps help with coming up with a good presentation:

1. structure the content in small portions that can be presented on one slide
2. present content intuitively, e.g., by images, diagrams, etc.
3. find adequate examples that are short, comprehensible and relevant
4. choose a level of presentation that is in line with the audience (MS or BS students)
5. Experience shows that longer program texts are hard to present - avoid them, or if necessary, concentrate on the essential parts and use pseudo code.

C. Slides

Slides are a useful means to complement the audio channel (what you say) with a visual channel. A few heuristics have proved useful:

1. every slide should be self-contained with a title that summarizes the point of the slide
2. slides should be well-structured; too much material on one slide will overwhelm the audience
3. avoid entire sentences, use action words or graphics instead - the audience usually can not listen to your explanations and read entire sentences at the same time. Moreover, avoid simply reading your slides to the audience.
4. use large fonts so that people in the back rows can read the slides
5. in case you resort to slides to be used with an overhead projector: the landscape format is usually preferable to portrait because those in the back rows will not be impeded in their visual experience by the heads of those sitting in front of them
6. don't use too many slides - as a rule of thumb, the presentation of one slide takes in-between two and five minutes.

D. Presentation

The presentation itself should take approximately 15-20 minutes. A few pieces of advice:

1. speak slowly, loudly, and clearly
2. try to connect to your audience - do not look at the wall. This helps with getting an idea of whether or not the audience can follow your reasoning.
3. if possible, do answer questions. Questions are usually not meant to harrass you; instead, they show that you may not have been entirely clear. In case a question leads to a disruption of your presentation because it is meant as a remark or an aside, you may very well ask to postpone the discussion to the end of your talk.