

Giving Seminar Talks

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Why Give a Talk?

Purpose of a talk:

- (A) teach
- (B) demonstrate your knowledge
- (C) demonstrate the importance/usefulness of a result
- (D) learn/practise

Lecture (others' work):	A
Seminar talk (others' work):	A, B, D
Tutorial (possibly own work):	A, (C)
Conference talk (own work):	C, A
Thesis defense (own work):	C, B, (A)

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Seminar talk (A, B, D):

$A \Rightarrow B$: If you teach effectively, then this also shows that you have understood the topic. (The reverse does not hold!)

Therefore: concentrate on A.

Teaching

Consequences:

Put yourself into the position of the audience when you plan the talk.

Be prepared that we may interrupt you, if we miss something.

For the audience: don't be shy; ask questions if you missed an important point.

(This gives the speaker the opportunity to adapt to the audience).

Before the Talk

Three tasks:

Understand the material.

Prepare the abstract:

reorganize the material, condense it.

Prepare the talk:

set priorities: select material in such a way that it can be understood in 45 minutes,

choose an appropriate combination of formal and informal material.

Remember: Talk \neq Abstract.

Structure

You have three minutes where the whole audience is listening.
The problem is to keep it that way for another 42 minutes:

Arouse interest.

Make sure that the audience knows

- where we come from,
- where we are,
- where we want to go.

Do not distract your audience from your talk.

Structure

Different talks have different structures:

Linear:

Current situation \rightarrow problem \rightarrow (partial) solution
 \rightarrow new problem \rightarrow clever new idea \rightarrow problem solved.

Branching:

Prove Lemma 1, Lemma 2, Lemma 3 independently,
put all together to prove the theorem.

Scattered:

Overview talk over some research area,
not focussing on a single goal/problem.

Structure

Table of contents:

is not always necessary (in particular if the structure is linear: every slide is clearly linked to its successor and predecessor),

may help the audience to understand the structure of the talk (in particular if the structure is not linear),

is not exciting by itself,

may be difficult to understand (using unknown vocabulary).

Structure

Consequences:

Use a table of contents, if it is helpful.

A table of contents should be supplemented by structural hints during the talk; sometimes it can even be replaced by such hints.

It may be useful to put the table of contents **after** the introduction or motivation.

General Guidelines

Do not distract your audience from your talk!

Common problems:

- superfluous text,
- unsuited font style,
- small font size,
- badly chosen colors,
- unknown vocabulary,
- unknown notations.

General Guidelines

Accept limitations:

previous knowledge of the audience,
time,
media.

Adapt to these limitations, rather than fighting them.

Slide Contents

Slides serve as:

memo for yourself,
supporting material for the audience,

Language:

usually no full sentences,
certainly no right-justified paragraphs,
but: conjunctions are important.

Slide Contents

Content:

Do not put things on a slide that you don't want to talk about. (In rare exceptions, say this explicitly and indicate relevant parts.)

Keep the slides isomorphic with your oral presentation.

Avoid forward references. (In rare exceptions, say this explicitly.)

Notation

Use consistent (and standard) notation, even if you talk about several papers and the authors use different notations.

Do not assume that your audience can remember an arbitrary number of symbols and definitions.

Consequences:

restrict the number of new symbols,
repeat definitions/explanations.

If possible, avoid notations that are difficult to pronounce
(“For each lowercase b in uppercase $B \dots$ ”)

Colors

Both dark on bright and **bright on dark** are acceptable.

Use colors for emphasis:

$$\frac{D \vee t \approx t' \quad C \vee s[t] \approx s'}{D \vee C \vee s[t'] \approx s'}$$

Colors

Both dark on bright and **bright on dark** are acceptable.

Use colors for emphasis – sparingly:

$$\frac{D \vee t \approx t' \quad C \vee s[t] \approx s'}{D \vee C \vee s[t'] \approx s'}$$

Colors

Both dark on bright and **bright on dark** are acceptable.

Use colors for emphasis

but remember: if everything is emphasized, then nothing is emphasized.

Do not assume that the colors on your screen match the colors on the projector.

(In particular green is often problematic.)

The thinner a line is, the more difficult it is to tell its color.

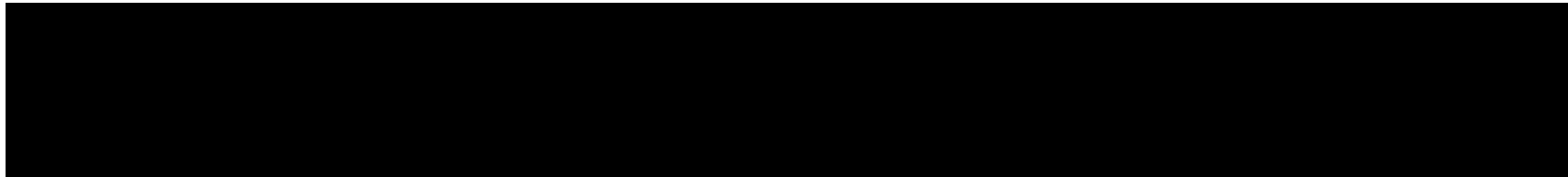
Colors

This is blue:



Colors

This is black:



Colors

And this?

Fonts

If possible use a sans-serif font instead of a serif font.

(This holds even for formulas: compare $x + z$ and $x + z$.)

Use a sufficiently large font size.

(If you manage to get more than 15 lines on a slide, the font is probably too small.)

Tools

Powerpoint:

Easy to create visual effects.

Difficult to enter formulas.

Beware of system differences

(MacOS/Windows, OpenOffice/Powerpoint).

LaTeX/PDF:

Easy to enter formulas.

Difficult to create visual effects.

Use one of the slide packages (**seminar, prosper, beamer**)

instead of the standard classes, such as **article**.

Speaking

Speak loudly and to the audience – not to the blackboard.

You may not read the text from a sheet of paper
(and you should not try to learn it by heart).

From time to time, make a break.

Timing

There are no exact rules how many slides are appropriate for a 45 minutes talk.

The number depends on

- amount of text,

- kind of text (statements, examples, theorems, ...),

- speaker.

Consequence: try it at home

(or better: give a rehearsal talk to a friend).

Final Notes

One can learn a lot about giving talks by observing others.

Everybody is nervous before giving a talk.

Don't worry about that.

Practice helps.