

## Presenting your work orally

The below regards scientific presentations at conferences and seminars, **not teaching**.

### Basic questions

What is my goal?

Which *one* most important message the audience should remember? (You cannot hope for more.)

Who is the audience? What do they know already?

How long time do I have?

Where is it? (Room size, equipment etc.? It's *your* responsibility that the technique works.)

Who presents me? (If anybody)

### Preparations

Don't underestimate the preparation time for a presentation. It *is* important to do it as well as you can. And everybody *can* learn how to do a good presentation.

### Make a storyline

- Start with something to raise curiosity and present the subject.
- For a long talk (>20 min), give an overview of the presentation, but don't waste time on that for a short one
- Do *not* start with the conclusions (even if some gurus insist – scientific conclusions are usually not understandable without a background and some methodology).
- Create loops in your storyline. Point forwards and backwards. Repeat key concepts.
- Try to put in some surprises (oral or visual) to recapture attention.
- Put your main message close to the end, after an attention getter, but not at the very end.
- End with future work and, if possible, something related to your start.
- At the very end, refer to *important* colleagues and invite questions.

### General

Remember that your main purpose is to be understandable and raise interest, not to overwhelm the audience with your intelligence. It's more important to answer "what?" and "why?" than spend the time on many equations that answers "how?" There you can do some "hand-waving".

You are engineers/computer scientists/mathematicians so spend *at most* a fourth of the time on the application. You should not lecture on medicine or biology or psychology or traffic control or... So make sure there are *some* equations and methods so what you do do not seem trivial.

Put your self in the place of the audience. Which questions would you have (write them down!)? Go through your presentation and check that the most important questions are answered. At the same time you will be ready for expected audience questions! Good to get help from a colleague here.

Always have "accordion" parts prepared, so you know what to talk more about if there is time left and what you should omit if there is not (this was easier in the manuscript and overhead days...)

Note that you *can* jump to a specific page without flipping though the ones in between in usable presentation programs.

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April 2016

Check that you know all the words you are going to use, especially if you will not talk in your mother tongue, so you do not have to search for them. Try to check pronunciation – at least roughly.

Bring your presentation on multiple media. Minimum is in the computer and a USB stick. And carry them in your hand luggage!

If it is outside IT, consider how to dress – not too sloppy but neither too dressed up. Display your knowledge, not your funny tie or low neckline! And women, please avoid the “business woman’s uniform.” It gives the wrong signal for a scientist!



No



No



No\*



No\*

\* Photo G. Borgefors at a scientific conference

Practise! And then practise some more! Both to yourself and to colleagues. And do it aloud, otherwise you will not have any idea of the time or if you know what to say. Few of us can do a good presentation, especially a short one, without practicing many times.

Finally, do take the time to read a basic book on rhetoric – already the ancient Greeks...

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April 2016

## Slides

Use the UU template, or your local version thereof, unless you are told not to by your supervisor.

Then ask why not?

Do not put a lot of stuff in a single slide – even if it is visible it is confusing. One or maximum two images/diagrams/tables and a few words is enough.

Estimate maximum one slide per minute as a rough average.

Use *large* contrasts, much larger than seems OK on your screen. The room may not be very dark and the projector may not be very good. And people want have enough light to see to make notes!

Never put essential information on the bottom of the slide.

Number your slides, but never put in the total number.

Avoid the new habit of putting an (almost) unreadable reference at the bottom of most pages.

Concentrate on images: photos, project images, diagrams... All the things you cannot say!

Try to have a theme arrangement for the slides so the presentation is coherent.

Images can also illustrate methods and algorithms and principles and... Be creative.

Films are illustrative not only for time changes and interactions but for 3D space and other things that are hard to see in 2D. But use them only if they are meaningful and you are absolutely sure they will work. Have back-up plans for non-playing films! "Standard" is fiction.

Never use high saturation colours for large things – used muted colours.

Use colours in the order red-blue-orange-black...

Think of the colour blind: do not expect people to see the difference between red and green.

Do not use blue for small details. There are no blue cones in the macula!

Never use red on green or blue (or vice versa) – this tires out the colour channels of the eye.

Diagrams of all sorts should be used to illustrate results, rather than Tables or text.

Give explanations of all axes in diagrams. If you have several similar diagrams in the same slide (generally to be avoided!) use the same scales for the axes.

Avoid big Tables. Try if you can colour code the contents of Tables.

Use text sparingly – make people listen, not read!

If you need more text for yourself, put it on your own screen only.

Remember the "rule of seven" – not more than seven lines of text in a slide.

For a small room, no character should be less than font 18.

For a big room, no character should be less than font 24.

These sizes are of course also for characters in equations, diagrams and tables! Even subscripts!

A serif font is easier to read than a sans-serif one.

Use a *very* limited number of different fonts and text colours.

White or yellow text on black or white on dark blue *can* be used, but I advise against it.

If you copy text from books they should be magnified *a lot* (>200%).

Don't use fancy fonts unless you have a very specific purpose for them.

Don't use "ghost text" – that is a list of light grey text that you make black step by step. People will struggle to read the ghost text instead of listening.

Instead, leave blank spaces on your first slide in a series and then fill them up iteratively.

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April 2016

Use equations sparingly (but do not avoid them completely) – they take time to digest for the audience and for you to explain. Refer to your paper for long maths.  
Equations should be created with care – and do imbed the fonts for them.

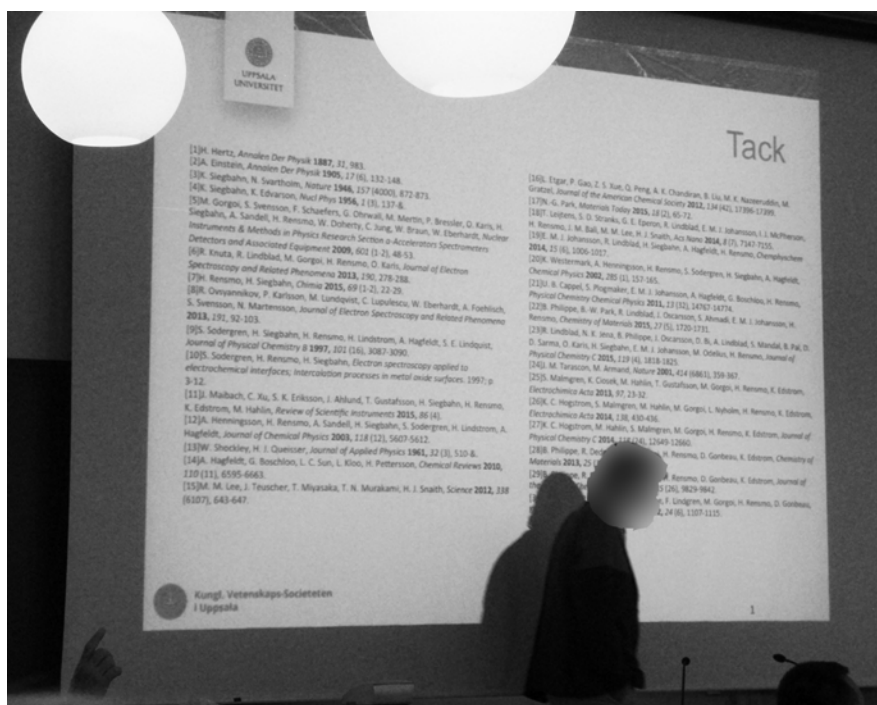
If you need to return to a slide in the presentation, put in a duplicate one.

Do not use fancy animations where things fly out and in and around. It only distracts. The same goes for Prezi with I personally *hate* – it makes me seasick. If things move on the screen, there should be a good reason for it.

Finish preparing the presentation by removing about half your text.

If you prepare handouts, they may need editing, but your slides should be easily readable at four/A4 (otherwise they are too small and busy!) If you have film, the handout should show a set of stills from it.

If you know there is a black-board, plan to use it. (Old-fashioned time sequences!)



Did anybody read this slide? *Could* anybody read the text?? Why make such a slide?\*

\* Photo G. Borggefors at a scientific presentation by a prize winner.

## **Presentation**

### **Things to do at a presentation**

Always use a microphone if there is one.

If you need to check that everybody can hear, ask the people on the last row to put up their hands in the voice volume you plan to use. ("Can everybody hear?" is a *really* stupid question.)

Thank the presenter for inviting you (if appropriate).

Vary your voice in volume and speed.

Make some pauses at important places – do not be afraid of a short silence.

Keep eye contact with as many as you can in the audience. If you are scared, use a friend as "eye-anchor".

Look at the computer screen, not at the big screen – then you talk *to* the audience.

Move around a bit.

Use a physical pointer if possible.

If you have to use a laser pointer, use it *very* sparingly and with a steady hand.

Use your allotted time, not more, not less.

Thank the audience for listening at the end.

Answer all questions politely, even stupid or aggressive ones.

If you can't answer a question, say so shortly without apologising or waffling.

If a question starts a discussion between you and one "audiee," suggest continuing afterwards.

### **Things not to do at a presentation**

Read by heart or use a monotonous voice.

Read the text on the slides (the audience is very probably literate!)

Speak very rapidly to cover as much as possible.

Fill every paus with "aeaeaehhh" sounding like a sheep.

Stand in front of the screen.

Run around all the time.

Look more at the slides than at the audience.

Point with your hand/finger.

Whisk around with a laser pointer all over the place and all the time.

Flip back and forth among your slides. (*Only* allowed at question time – and then you should move directly to the appropriate page if possible!)

Show a slide for less than 10 seconds.

Talk too long – if you do *that* is your main message!

Have your hands in your pockets.

Make strange noises, for example clicking a pen or playing with your keys.

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April 2016

### **Things *never* to say at a presentation**

Repeat what your presenter just said (name etc.)

“Can everybody hear”?

“If I had more time...”

“You cannot see this, but...”

“Is everybody familiar with...?”

“I assume everybody knows...”

“NN needs no presentation.”

“good” as an adverb

### **Alternative**

Start directly

See above!

“You can find more information on X at...”

Use large enough contrast, text, and figures

Know your audience.

Don't. Ask your invitee about this.

Make a very short presentation even if it is a very familiar name or concept

Use “well”

### **Attending seminars**

See every seminar you attend as a learning experience. Every time you see something you like in a presentation, remember it and include it in your own ones. When you see anything you do not like, remember it and avoid it. Add these presentation technique things to your seminar notes. There are several interesting seminar series going on around you – attend regularly.

Vi2 seminars, see <http://www.cb.uu.se/seminars/>

IT seminars, see <http://www.it.uu.se/lesit/>

CoSy lunches at Ångström,

see <http://www.math.uu.se/cim/activities/complex-systems-workning-lunch/>

Tuesdays at noon, list: <mat-cim-all@lists.uu.se>

Celsius-Linné lecture and Symposium in February,

see <http://teknat.uu.se/celsius-linne/>

Ångström lecture in May

and generally at UU <http://www.kalendarium.uu.se/?languageId=1>

## **Presenting your work as a poster**

Remember: You usually get more interesting scientific contacts at a poster session than from an oral presentation – take advantage of this!

### **Basic questions**

What is my goal?

Who is the audience?

Where is it? (Big or small room? Likely to be crowded?)

What size should the poster be?

Is material to put it up provided? (Don't assume that. Be prepared!)

### **Preparations**

Don't underestimate the preparation time. Leave time to consult your advisors and for the poster to "mature".

In general, it is preferable if you use new examples and illustrations in the poster compared to the paper, to show your work is versatile. Prepare those.

Consider what the main message is. Prepare a "drawing-in" image and some catchy headlines to get that across. Think about the layout of a newspaper page (without the text blocks).

Sort through your material in three heaps: what *has to* be included; what *could* be included; and what *cannot* be included (biggest heap!).

Look at various posters at home and abroad. Take the time to think about what you like and what you do not like. What raised your interest and what was a yawn?

### **Poster**

*Less is more* is the main message. The poster is *not* a shorter version or a summary of your paper. It should initiate interest, start discussions, create contacts and make people want to read your paper.

Include the UU logo and those of any outside co-authors. But don't clutter up with all address and contact info – give out your UU business card instead. Organisation, city and country are enough, for us: "Uppsala University, Sweden".

Most of the suggestions for presentation slides are valid here too. Think of the poster as a large slide – or better a "composite" of four slides. You cannot get more into the poster than that! It's especially important to use pleasant, muted colours for large areas. (It's not the background that is the message!)

Have very little text. A spruced up version of the Abstract is enough as a running text. For the rest, use images, diagrams and headlines.

If appropriate, a "running example" is a good way to present your method, illustrating the different steps of your method with a *short* text following each. Then you can discuss each step with the costumers.

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April 2016

Collect all your “floats” (images, diagrams, text boxes) and start placing them on the poster. This will probably create a number of versions to discuss with advisors and colleagues. Some floats may have to be abandoned. Others modified.

Have some sort of order among your “floats”, for example two columns. Align things both horizontally and vertically or have a large enough difference to make it clear that the floats are on different levels.

Never bring a poster to a meeting that you have not shown to and discussed with at least five colleagues!

Use a poster tube for travelling and take it as hand luggage (but don't make any jokes about bazookas at the security check!).

### **Presentation**

Put up your poster in the correct place as soon as you are allowed to.

Be by your poster at session start and stay the whole time. Do not be tempted to walk around looking at other posters or talking with your neighbouring presenters even if there is a lull.

Try to talk to everybody that stops and watch instead of spending all your time and attention on a single interesting “costumer.” Suggest meeting at the coffee break if one person hogs all your attention.

Bring a bunch of A4 copies of your poster to give out (if things are too small to see on A4, your poster is too crowded!) Also bring a bunch of business cards and hand out as many as you can. If the poster is allowed to be up when you are not there, place holders for A4 and business cards by the poster.

If the poster can stay up before and/or after the poster session, let it. The more that see it the better. If this means you cannot take it home, no matter – you can always print a new one.

### **Poster introduction**

Sometimes you will be given to opportunity to give a 1-3 minute advertising talk about your poster. Prepare that as you would any presentation, but do *not* try to make a “short version” of a normal oral presentation. Do not use more than two slides (even if allowed, which it usually is not) and don't put more on them than you usually would. Avoid text – that will get you no costumers! Do not talk at sport reporter speed. Instead, use the best formulations from the Introduction about “what is the problem?” and the best from the Conclusions about “what did we achieve?” in your talk and the best illustrations from the poster (not paper!) on the slides so people will recognize it from your short talk.