# 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.

# <u>General</u>

Remember that you 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". Remember that interested people can read all the details in your proceedings paper.

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 present 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. Make notes or remember numbers.

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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 travelling!

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/air hostess' uniform." It gives the wrong signal for a scientist!



\* Photo G. Borgefors at a scientific conference

No\*

No\*

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...

#### <u>Slides</u>

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: 8% of the men in the audience do not 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. More about using colours here: http://www.cb.uu.se/~gunilla/Choosing\_colours+.pdf

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 any small 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 in 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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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.

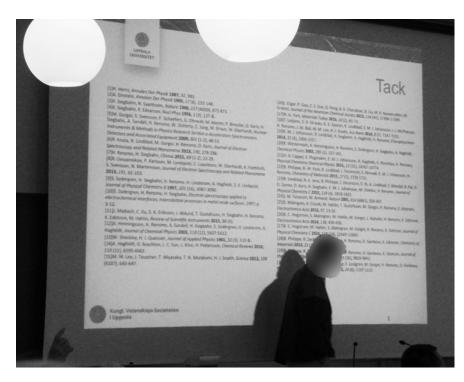
If you need to return to a slide in the presentation, put in a duplicate one.

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. Borgefors 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 an "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.

#### 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 you own ones. When you see anything you do not like, remember it and avoid it. Add these presentation technique things to you your seminar notes.

There are several interesting seminar series going on around you – attend regularly.

Vi2 seminars see https://www.it.uu.se/research/visual\_information\_and\_interaction/seminars IT seminars see http://www.it.uu.se/lesit/kalender/ CoSy lunches at Ångström, Tuesdays at noon (food included) see http://www.math.uu.se/cim/activities/complex-systems-workning-lunch/

Celsius-Linné lecture and Symposium in February, see http://teknat.uu.se/celsius-linnaeus/ Ångström lecture in May

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