CS187 - Science Gateway Seminar for CS and Math

Fall 2013

Oct. 10, 2013
You will give lots and lots of presentations!

At work, school, conferences, job interviews...

No point doing work if others don’t know about it

You should be able to communicate your ideas and your work effectively
Types of Talks

- Short “this is what I do” talk (5 minutes)
- Scientific conference talk (15-30 minutes)
- Project presentation to class (10-20 minutes)
- Seminar talk (approx. 50 minutes)
- Job talk (approx. 50 minutes)
- Talk to team/research group about your work (mostly informal)
- ...

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Dos and Don’ts – Style

- Don’t use small fonts! Rule of thumb – at least 24pt.
- Smaller fonts should be used only for citations or figure captions.
- In any case don’t put too much text in one slide.
- Use sans serif fonts (like Arial or Calibri). Serif fonts (like Times new roman) don’t look good on screen.
- Use them for printed material such as articles or posters.
Dos and Don’ts – Style

- Use graphics! Lots of it!
- Use nice, high-res graphics.
- Acknowledge your source and notice that images may be copyrighted.

![A Picture is worth a thousand words.](http://oels.byu.edu)

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http://oels.byu.edu
Dos and Don’ts – Style

- Keep your layout nice and clean
- Don’t use busy color schemes or fancy fonts
- Use animation in moderation (if at all...)
- Keep it black on white.
- avoid yellow
Dos and Don’ts – Style

- Check your slides carefully for spelling errors and typos
- A spell checker is fine but not enough (then vs. than, its vs. it’s etc.)
- Be extra careful with potentially garbled equations
- Label axes, define variables and abbreviations (unless obvious)
Typical 15-minutes Presentation Contents

What you’ll say, what you say, what you said. Approximately 12-15 slides (average 1-2 minutes/slide).

- **Title** - the title of the topic, the name of the presenter(s) (1 slide, few seconds).
- **Definition, motivation** – The question you explore, why this is interesting (2 slides, 2 minutes).
- **Background** – Sources identified and utilized to provide information and insight (1-2 slides, 1-2 minutes).
- **Methods** – Algorithms, formulas and other sources used to produce the work (1-2 slides, 3 minutes).
- **Results and Discussion** – Your findings and conclusions regarding the question (4-5 slides, 6-7 minutes)
- **Conclusions** – A brief summary of your talk, future directions to explore (1-2 slide, 2 minutes).
- Backup slides if expected questions come up (optional).
Title Slide

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Topic Definition and Motivation

- What most people take out of the talk...
- Everyone in the audience should understand this part
- What, why, how
- **Start by defining the problem you are presenting today**
- The item above is probably the most important thing about giving a talk, but often ignored
- Why is it an interesting problem
- How the work you present deals with the problem
Every work builds on existing foundations
Whether it is your work or others’, display existing and previous work
Acknowledge/cite the sources (including figures, unless you created them yourself)
You have no time, so stick to the important stuff
Algorithms, computational methods, experimental design

- Explain, but do not put too many details here (common mistake!) unless a highly specialized talk.
- In a seminar or job talk – specialists should follow
- Define variables before use, make sure variable names are consistent and formulas are correct.
- You can show pseudo-code or flowchart, try to avoid actual code...
Results and Discussion

- Graphs, plots, tables
- Some discussion of their importance
- Make sure graphs and tables are readable
- Axes should be labeled.
- Avoid yellow, avoid red+green (color blindness is quite common among male population!).
- Stick to the important findings.
Conclusions and Future Directions

- A brief summary of what you talked about.
- What did we learn here? 2-3 points are enough.
- How can this work be extended?
- What still remains unsolved?
- In the end – thank the audience and solicit questions.
**Most Important Rules**

- **Know your audience!!!**, plan the talk accordingly (if you’re not sure, it’s ok to ask the hosts)
- Know your topic! (don’t put anything on the slides that you don’t know or can’t explain).
- Avoid jargon (unless a specialized talk) and define non-obvious terms before using them – including, and especially, non-standard acronyms.
- Eye contact and confidence can help a lot (it DOES get better with time)
- **Practice practice practice!** To yourself and to people in and outside the field.
- Time your talk and make sure you don’t exceed your time (another common mistake).
- Know what you want to say in every slide (did I say practice?).
Have multiple copies of your talk – flash drive, e-mail, your laptop and a printout.

Before your talk – make sure presentation runs smoothly on the computer you’ll display on (it’s ok to ask ahead what computer it’s going to be)

Especially important if you have video, animation or a different OS

(my advice – use PDF slides, avoid in-presentation videos)

Printouts and offline copies are important in case of emergency (power outage, computer breakdown, war etc.)
A scientific paper is built in a similar way:

- Abstract
- Introduction
- Methods
- Results + discussion
- Conclusions and future work
An 3-page essay is not as rigid

- Title and name of student
- Abstract/Short Introduction – What is the problem you researched (first sentence!!), why is it interesting and important? (1/2 a page).
- Methods – summary of the algorithms/scientific methods/mathematical concepts (1 page).
- Summary of results/findings and discussion from your point of view. (1 page)
- Conclusions What was the essay about, what are your findings and conclusions, possible future directions for exploration (1/2 a page).
Writing an Essay – Format

- 11 points, single-spaced, 1-inch top/bottom/left/right margin
- Use Word, LaTeX, Open/Libre/Mac office… NOT handwritten, please.
- Use serif fonts (Times new roman etc.). They look better in print.
- Check spelling, contents, and please ask for help if you need it.