Preparing Slides
and giving
an excellent academic talk

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Mar. 2015
The Problem:

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Clearly, while some people are born with a gift of excellent communication skills, for the rest of us, giving a good talk requires some experience and a lot of preparation.

A note to academic advisers: Even though we teach our students how to do research, we rarely provide them guidance on how to present it.
Giving a Good Talk

The goal of these slides is to provide some tips, advice and guidelines on how to

- prepare your presentation
- prepare for your talk
- give an excellent talk

This document is work in progress.

Comments and suggestions are most welcome!

drop me an email to boaz.nadler@weizmann.ac.il
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Important things to consider before preparing your talk:

- what is the purpose of your talk
- who is the expected audience.
- how much time is your talk
Purpose of talk

Communicate your ideas.

Emphasize more on the main challenges, concepts and ideas, less on the very technical details.
Think:

what is the main message of your talk?
what is the problem you considered?
why is the problem (or the solution) interesting?

Hint: Do not attempt to present the results of your 7 latest papers in one talk!
Don’t be Lazy!

Most of us have worked for several months if not years, on formulating a problem, solving it, writing a paper and eventually publishing it. So, it is reasonable to spend at least a few DAYS summarizing this in a well polished and professional presentation.

If you did an excellent research, then you’ll probably present (variants) of this talk multiple times at several places.

Key Message: *Preparation is well worth the effort.*
Don’t be lazy!

At a conference/workshop/seminar between 10 to 100 other researchers will be listening to your talk, and spending their precious time paying attention to you.

This is a one-time opportunity. If you give a bad talk chances are they will not look at your paper or even worse, not listen to other talks nor read other papers of yours.
Some Key Ingredients:
A good set of slides typically clearly states and explains the following:

What is the problem you solved / formulated?
Why is it interesting?
What is (high-level description) of previous work on subject?
What is your contribution.
Many good talks have a double funnel structure.

- Start wide: broad overview of field, its importance, noteworthy previous works.
- Narrow focus on specific problem of your own work and its solution.
- End wide: broad applicability of your findings / potential future extensions of your technique, other problems where it may be applicable etc.
The time given to your talk typically depends on the venue.

In conferences, talks are typically between 15 to 45 minutes.

Department seminar talks are typically longer, between 50 minutes to 1 hour. Some seminars are 2 hours long.

DO NOT GO OVERTIME !!!

Rule of Thumb: Number of Slides < Number of Minutes.
- Choose a clear short and informative title.

Don’t forget to acknowledge your collaborators!
Checklist: Things to avoid

Do some of your slides contain:
- too many words?
- too much mathematical / technical detail?
- figures with fonts too small?
- figures with too much detail?
- tables with lots of numbers?

Does your presentation contain:
- too many slides?
- too many messages in one talk?
- too many acronyms, definitions, subscripts, etc?
- English typos?
Each slide should have one (and only one) clear purpose.

In addition, you may wish to use various visual queues to help the reader focus on this purpose.

**Examples:**
Some use **color** to emphasize an important point / concept in a slide.

- centered lines can emphasize a key conclusion / question etc.

**Bold text** may emphasize key topics (e.g. **Theorem:**).

**Do not:**
- use too many colors in one slide
- use colors that are difficult to make out (e.g., yellow on white background).
- use non-white background (makes it difficult to read text).
They say a picture is worth a thousand words

yes, BUT

when the picture is in *focus*. 
Figures

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when the picture is in focus.

When presenting a figure:
- is it really clear?
- is there a simple conclusion / take home message from it?
- does it correspond to the ideas in your talk / previous slides?
- are the x and y axis clearly marked?
- are the fonts readable (or were you lazy and took the figure from the paper, with tiny fonts...)?
- Are the lines and symbols easily viewed from far?
- Does it introduce irrelevant / confusing issues?
To make fontsize larger and viewable consider the following in Matlab:

```matlab
figure(20);
set(gca,'fontsize', 24);
```

For legends that contain latex symbols consider the following

```matlab
h = legend(....);
set(h,'interpreter','latex');
set(h,'fontsize',24);
```

Clearly viewable lines:

```matlab
plot(x,y,'b-','linewidth',2);
```
Give the talk in your office, talk aloud, see that slides connect one to each other, that the presentation goes fluently.

Give the talk in front of your friends. Give a practice talk at your research group.

Do not speak in a monotonic voice (unless you want your audience to fall asleep...)

Show *enthusiasm* and excitement about your work. It will be viral.

If you are not a native English speaker, prepare in advance words or even sentences that you want to use in your talk. Write them down.
The day of your talk has finally come :) Be prepared for it.

Arrive to the lecture hall at least 15 minutes before your talk, setup your computer well in advance, make sure everything works.

As a backup, have your presentation also on a USB stick, should the unexpected occur.

Use the blackboard to write a specific example, illustrate something not on your slides, answer a question from the audience etc.

Make eye contact with the audience !

Don’t loose your audience, don’t talk to yourself.
Suggested Reading


- *Giving an academic talk*, by Jonathan Shewchuk
  http://www.cs.berkeley.edu/~jrs/speaking.html

- Many additional links appear here:
  http://www.samsi.info/forms-and-resources/postdocs