Giving Talks

- Chris Godsil, November 26, 2014
It’s not rocket science
The Question is:

- What are trying to do in your talk?
The Answer is:

• Explain why you are interested in your topic, and why your audience should be interested.
No Teaching!

- This is not an opportunity to teach or instruct.
- All those lectures you have suffered and slept through in your courses do not provide a model.
The Structure
Every talk should have a beginning, a middle and an end.
In The Beginning

• Give the audience some idea about where you will be taking them, and why they should pay attention.

• Do not start with a definition, or with the statement of a theorem.

• Examples are always good.
The body of the talk will be a number of sections.

Each section has its own beginning, middle and end.
Don’t Go Off On Your Own

• At any instant, the audience should know what you are trying to do. (Describing an example? Proving something?)

• Say what you are about to do, do it, then state what you’ve done.
Ending

• Do NOT go over time!
• If you’re running out of time, leave something out.
• If, during the talk, you get involved in a lot of discussion, you will need to skip stuff.
• Finishing too early is an error too.
End Well

• End on an upbeat! Do not mumble off into the distance.

• A summary would be better then nothing. But you could mention questions that follow naturally.
Human Nature
Manners

• Sit down while you’re waiting for your talk to start. (Not manners, but you will not get so nervous.)

• No matter what goes wrong, do not complain or criticize. Do not belittle your work or your presentation.

• When you’re finished, let the chair call for questions.
Nerves

• Nerves never go away, but you can learn to deal with them.

• Be aware that nerves are more of a problem when the audience is larger, or does not consist of friends and family.

• You are allowed to stop talking from time to time. To think, for example.
Motivation

• Make as much as you possibly can of connections between your topic and stuff that your audience knows.

• The history of a topic brings a personal connection. As might the story of how you came to the topic.

• “I’m rabbiting on about this, because my supervisor said to” will not work.
• Be really careful to write down who is responsible for each idea or result that you use.
Dealing with Questions

- Make **absolutely** certain you understand a question before you try to answer it.
Preparation
The Basic Question

- What are the one or two points you’d like your audience to remember when your talk is over?
Outlines

• Decide what your main point is, and write it down in one or two sentences.

• Write down an outline. Anything that does not contribute to the main point should be omitted.

• On paper, write out everything that the audience will see.
Movement

• Think of your talk as a story, in which people do things, and time passes.
• Mention names and dates
It’s all about Examples

• I have never attended a talk with too many examples.

• Use examples to illustrate definitions and theorems (if you must have theorems)...

• ...but do the examples first!
How much can I cover?

- The only way to cover a lot of material is to leave a lot out.
- Don’t overestimate your audience.
You will inevitably have too much material, trust me.

It is amazing what you can leave out.

It is even more amazing how your talk improves when you omit stuff.
Practice

• Practice your talk.

• When your talk is in good shape and the right length, practice in front of an audience. (An audience of two or three is fine, just not your fan club.)

• If you find yourself saying “If time permits....”, then you have not prepared properly.
A Few Points

• Do not use a blackboard in combination with the projector

• It’s good to move around

• The best pointer is your finger
Laser Pointers

• are not light sabers

• use them sparingly (or not at all)
Technical Details
The Standard Tool

- is a LaTeX package: beamer
Alternatives

- powerpoint/keynote
- blackboard
- html5 + mathjax
Whatever You Use...

- Don’t fill the frame...
- ...don’t even go close
Starting with Beamer

- Learn LaTeX
- Read the beamer manual
• Don’t be clever. Just keep things simple and only use the bells and whistles for occasional emphasis.
Verstraete’s Law

- Test the hardware before the talk
- Bring all the bits you might ever need
• You can use any pdf file (or jpgs, or...)
• tikz is a good solution, but there’s a learning curve.
The End