

Giving a Good Presentation

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First there was the blackboard, and all talks were given using one. Then there was the overhead projector. Now the method of choice for a talk is PowerPoint. Here we discuss how to give a talk where the assumption is the speaker is using PowerPoint. However, if you are not, most of the advice still applies. Whether this is your first talk or your 100th, the advice is still worth reading.

Preparation

Ok, so you've decided to give a talk. We will assume you already have, or are close to having, all the results you need whether it's through an REU or some other sponsored research program, or from independent research overseen by someone at your institution.

When giving a talk, you need to have a title and abstract. Some things to keep in mind:

- A title should be short and informative. Cute titles are usually poor titles. "On a Theorem of Erdős" is too vague. "On Erdős's Prime Number Theorem" is short and informative.
- Your abstract should be one or two paragraphs. It is not supposed to be a mini-version of all your results, but a taste to whet the audience's appetite.
- Include in your abstract the level of the talk; e.g. "This talk is intended for a general audience."

Next comes the actual putting together of the talk. Of course a faculty advisor can help you,

but here are some key ideas.

- It's almost impossible to overestimate what the audience knows about your subject.
- Keep technical terms and unfamiliar symbols to a minimum.
- Don't try to do too much.
- Use simple examples and concrete special cases.
- Provide a context for your talk. Explain how you got interested in the subject. Mention others who have worked on the subject of your talk.
- Use a very large font (even for a talk in a small room). If you reproduce printed material, enlarge it.
- Restrict each slide to a small number of lines.
- Avoid filling slides with equations and formulas.
- DO NOT COMPUTE IN PUBLIC.
- If you need a particular slide more than once in your talk, reproduce it at the appropriate places rather than going back to it.
- Many people find unwarranted use of special features of PowerPoint annoying. No flying equations.
- Rehearse your talk, but do not memorize it.
- Anticipate questions you may be asked and have a response to them prepared.

- Practice your talk using a projector and time it. Don't forget to leave time at the end for questions.
- Conjectures and open problems add interest.
- Prepare transparencies as a backup. Equipment can fail. Practice with these, too.
- Be sure you know what equipment/software is provided. You may have to bring your own.

Delivery

You've practiced, but you're still a little nervous. That's normal. Remember, the audience wants you to do well. Some key points to help you do your best:

- Show up early to check out the room and the equipment.
- Erase chalkboards/whiteboards even if you don't plan to use them.
- It helps to have a laser pointer and use it to highlight items.
- Keep some room lights on. The audience wants to see the speaker.
- Begin by letting your audience know that you are happy for the opportunity to speak to them.
- Show enthusiasm for the subject.
- Generally stay off to the side, but MOVE, MOVE, MOVE.
- Don't read your slides to the audience. Spend most of the time looking at the audience.
- MAKE EYE CONTACT. Single out a particular person in the audience who appears to be interested in what you are saying.
- Don't distribute handouts at the beginning or during your talk.
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- Speak loudly. Project to the people in the back.
- Vary your voice for dramatic effect. Pause before stating a major result, raising a question, or showing a complicated figure.
- It is not necessary to prove anything.
- Don't belittle your own results or downplay your own knowledge of the topic. It reduces your credibility.

The End

You're almost there. Just a few things to keep in mind to with your talk.

- Don't forget to leave time for questions. If you are slotted for 15 minutes, speak for 13.
- When you are asked a question, move towards the person who asked it and repeat or rephrase the question for the audience.
- Have a grand finale. It could be the main result, a conjecture, an open problem, or an application.
- Close by thanking your audience.
- DO NOT EXCEED YOUR ALLOTTED TIME.
- Plan to stay a while after your talk. People may want to talk with you about it.
- After your talk, do a self-evaluation. Make notes about what went well and what could be done better next time.

