Scientific Presentations

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Announcements

• Results and discussion (change due date – next Sunday)

• Presentations are next week

• Extra Credit (1/2 point for each event, up to 6 events or 3 points)
Results and discussion

- Abstract, Results, Discussion, References

- Include tables and figures as needed to demonstrate your results or discussion points

- Use same rubric for the final paper

- Due Tuesday November 24th, Sunday November 29th
Presentations

• 10 minutes talk
• 2 minutes questions
Talks reach more people

• Many more people will listen to your talk than read your paper
• The scientific talk has become one of the most important forms of communication
Style of presentation

- Lots of visual aids
- Casual
- Extemporaneous (seemingly)
- Do not read from note cards
- Analyze out loud and think on the fly
Style of presentation

• Manipulate visual aid
• Project the aura of being at ease with the material
• Have the presence to answer unanticipated questions
• ***an unprepared, sloppy talk is a waste of both the speaker's and audience's time
• ***a poorly prepared talk makes a statement that the speaker does not care about the audience
Prepare your material carefully and logically

• Tell a story.

• The story should have four parts:
  – Introduction
  – Method
  – Results
  – Conclusion/Summary
Introduction

• State the problem
• Give your motivation to solve the problem
• Tell the audience why they should care
• Convince the audience that the subject is important to them as well as you.
Methods

• Explain your approach
• Talk about why you decided to use it
• Talk about how it will answer your question (logic)
• Explain the caveats of the approach

• More interesting if it is story-like instead of text-book like
Results

• Brief summary of main results
• Be clear when you are explaining your results
• Include only the most important details
• During the question section, people can ask about the less important details.
Conclusions/Summary

• Condense results and tell implications
• Be brief
• A bullet/point or outline is helpful
• Connect results with overview in introduction
• Don’t have too many points (3 or 4 maximum)
Extras

• Previous four items are the core of a good talk
• Good speakers often broaden the Introduction to set the problem within a very wide context
• Good speakers may also add fifth item: *Future Research*
Old saying...

"Tell'em what you are going to tell'em. Tell'em. Then tell'em what you told'em."
Repeat the information in a different way

• people absorb very little information at first exposure
• multiple exposures are the best way for ideas to sink in
• it is ok to state some of your results in the introduction
• repeat your main points in the results/ conclusion sections
Practice your talk

• there is no excuse for lack of preparation
• the best way to familiarize yourself with the material and get the talk's timing right is to practice your talk
• practice is not beneath you
• this is an arrogant attitude
• even a quick run through will produce a better talk
• even better, practice in front of a small audience
Don’t put in too much material

• good speakers will have one or two central points and stick to that material
• don’t squander time on unessential details and then run out of time
• communicate scientific results, don’t show people how smart you are
• *less is better for a talk*
• each slide or figure takes about 1 minute to show.
• assume most of the audience knows very little about the subject, and will need a clear explanation of what you are doing not just details.
Avoid equations

• show only very simple equations if you show any at all
• there must be an important point to showing an equation, if you decide to
Only have a few conclusions

• people can't remember more than a couple things from a talk especially if they are hearing many talks
• how do you typically describe a talk? I say "So and so looked at such and such and they found out this and that."
• I don't say, "I remember all 6 conclusions points."
• people will only remember one or two things from your talk - you might as well tell them what to remember rather than let them figure it out for themselves
Talk to the audience, not the screen

• one of the most common problems is that the speaker will speak to the screen
• it is hard to hear the speaker in this case
• without eye contact the audience loses interest
• this is difficult to avoid, but the speaker needs to consciously look at the object on the screen, point to it, and then turn back to the audience to discuss the feature
Talk to the audience, not the screen

• don't start talking right away when you put up a viewgraph
• let people look at the viewgraph for a few moments
• they usually can't concentrate on the material and listen to you at the same time
• speak loudly and slowly
• I like to pick out a few people in the audience and pointedly talk to them as though I were explaining something to them
Avoid making distracting sounds

• everyone gets nervous speaking in public
• sometimes the nervousness often comes out as annoying sounds or habits that can be really distracting
• try to avoid "Ummm" or "Ahhh" between sentences
• if you put your hands in your pockets, take the keys and change out so you won't jingle them during your talk
Polish your graphics

• **Use large letters (no fonts smaller than 16 pts!!)**
  – To see how your graphics will appear to the audience, place the viewgraph on the floor - can you read it standing up?
  – Make sure figure axis and captions are readable.
Polish your graphics

• **Keep the graphic simple**
  - Don't show graphs you won't need.
  - If there are four graphs on the viewgraph and you only talk to one - cut the others out.
  - Don't crowd the viewgraph.
  - Don't use different fonts or type styles - it makes your slide look like a ransom note.
  - Make sure the graph is simple and clear.
  - A little effort on graphics can really make a talk impressive.
Polish your graphics

• **Use color**
  
  – Color makes the graphic stand out
  
  – Avoid bright red or yellow in the text – it is difficult to see from a distance
  
  – Check your color viewgraph using the projector
  
  – Some color schemes look fine on paper, but project poorly
Polish your graphics

• **Use cartoons**
  
  – I think some of the best talks use little cartoons which explain the science.
  
  – It is much easier for someone to follow logic if they can see a little diagram of the procedure or thought process that is being described.
Use humor if possible

• A joke or two in your presentation spices things up and relaxes the audience.
• It emphasizes the casual nature of the talk.
• I am always amazed how even a really lame joke will get a good laugh in a science talk.
Be personable in taking questions

• Questions after your talk can be scary.
• But questions are very important.
• If there are no questions after a talk that I give, I am disappointed.
• It means that I failed to stimulate the audience, or that they understood nothing of what I said.
• I failed to communicate.
• Questions tell you what part of your talk the audience did not understand.
• Questions may also help you focus your research or help you in the write up.
Best way to answer questions

• **First, repeat the question.**
  – This gives you time to think, and the rest of the audience may not have heard the question.
  – Also if you heard the question incorrectly, it presents an opportunity for clarification.

• **If you don't know the answer then say "I don't know, I will have to look into that."**
  – Don't try to invent an answer on the fly.
  – Be honest and humble.
  – You are only human and you can't have thought of everything.
Best way to answer questions

• If the questioner disagrees with you and it looks like there will be an argument then defuse the situation.
  – A good moderator will usually intervene for you, but if not then you will have to handle this yourself. e.g. "We clearly don't agree on this point, let's go on to other questions and you and I can talk about this later."

• Never insult the questioner.
  – Be polite and exercise good professional sense.
  – You never need more enemies.
A couple miscellaneous points

• **Thank you** - It is always a good idea to acknowledge people who helped you, and thank the people who invited you to give a talk.

• **Dress up** - People are there to hear your material, but when you dress up you send the message that you care enough about the audience to look nice for them.

• **Check your viewgraphs before you give the talk.** Are they all there? Are they in order? This is especially important with slides.