

Effective Presentations

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Three Goals for Your Presentation

- 1 To engage the audience - make them want to read your paper.
- 2 To have the audience say "This was a good talk, and I understood what was speaker talking about."
 - How many talks have you been to where you could say this?
 - Note that you can learn a lot about what to do and what not to do by listening to other talks.
- 3 To leave the audience with one or two "take away" points.

How do you accomplish these goals?

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Acknowledgements

Parts of this Seminar are based on or motivated by material from:

- 1 "*Effective Oral Presentations*" by Gail Palmer, Georgia Institute of Technology as part of her Professional Communication Program, and
- 2 "*How to Give a Good Talk*" by Hany Farid, Professor of Computer Science, Dartmouth University.

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Part I The Slides

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General Guidelines

- Don't overwhelm the audience.
 - It is better to clearly explain one or two main ideas than to cover four or five quickly or in a cursory manner.
- If you try to cover too much, the audience will be overwhelmed and will stop paying attention.
- In a 20-30 minute talk, your audience can only absorb and retain one or two important ideas.
 - Decide what you think are the one or two most important ideas in your work and present them clearly.
- At the end of your talk you can briefly discuss other aspects of your work, and refer interested individuals to your papers.

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Structure of Your Talk

Your talk should include the following:

- 1 Introduction to the problem.
- 2 Explanation of why this is an interesting or important problem.
- 3 Overview of previous work, placed in the context of your work.
- 4 Description of the specific problem that you are going to solve.
- 5 Explanation of how you solved this problem.
- 6 Statements of how your work advances the field.
- 7 Discussion of the remaining open questions and problems.

Personal Opinion: Outline slides at the beginning of a talk are silly and unnecessary - they all are exactly the same and are a waste of precious time.

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First Step - Planning Your Paper

The first step in the preparation of an *Effective Presentation* is to make an **outline** of your talk, and

- Identify the one or two important points you want to leave your audience with.
- Define the scope of your talk and the level of detail, both of which should be based on the expected audience.
- Determine the number of slides that you will need, and assign the appropriate number to each part of your talk.

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Talks Versus Paper

- Talks are much different than papers. You must explain all details of your work in a paper, but this is not necessary in a talk.
- The primary goal of a talk is to summarize your work, and not to explain every detail.
- It is preferable to leave out particularly complicated or notationally heavy details that are not critical to the understanding of the basic concepts.
- It is more important to explain the general concepts, build intuition, and then allow those who are interested to read your paper to get all of the details.

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Simplify Your Slides - Simple is Better

- Minimize the amount of text and information on each slide.
- A good slide may contain a simple figure, graph, or equation along with some descriptive text.
 - If your slide has too much text or is overloaded with information, then you create a conflict for your audience: should they listen to you or should they read?
 - Most likely, they will read and ignore what you are saying.
- Simplify your mathematical notation. If it becomes necessary to use complex notation, remind the audience every once in a while about the notation that you are using.

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Color can be Effective and Overdone

- Use color to
 - Emphasize information
 - Promote understanding
 - Provide effective redundancy
 - Add interest
- Do **not** use color where black and white will work better.
- Use only two or three colors at a time.
- Use consistent color throughout your slides.

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Slide Design

- Be consistent with font size and style.
- Use sans serif fonts (Arial), and try to use fonts no smaller than 24 point, and never smaller than 20 point.
- Don't get fancy with colors, fonts or backgrounds (they can be distracting).
- Use black text on a white background, and use color only when you need to emphasize something.
- Use an uncluttered design and simple format.
- On each slide:
 - 1 Include a title
 - 2 Use short phrases - seven words or less per line.
 - 3 Use nine lines or less on a slide.
 - 4 Make sure that there is plenty of white space.

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Number of Slides

A very common mistake that is made is to have **too many slides**.

- For a N minute talk, my general rule is to have N slides (for short talks) and closer to $N/2$ slides for longer (50 minute) talks.¹
- This gives you one minute for each slide and, with uncluttered slides, allows for the focus of attention to be on you, the speaker.
- Too many speakers use $2N$ slides (or more) for N minutes, which means only 30 seconds per slide or less, and the talk then begins to resemble a travel guide slide show.

¹Do not count the title slide in your count, and you may adjust the count if you have some simple slides that contain only a picture or an image.

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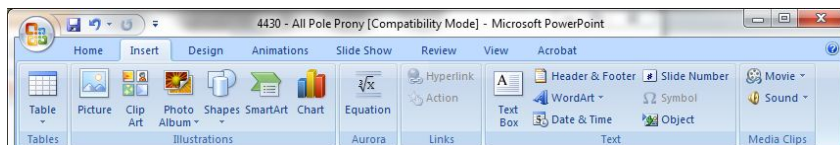
PowerPoint Presentations

- If you use PowerPoint, try to break free of the templates provided by the software - they are ugly, many are overused, and they often produce text-heavy slides.
- Do not use any of the PowerPoint features such as sound-effects or fade-ins. They are silly and distracting.

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PowerPoint and Aurora

- Technical presentations with mathematical equations present some challenges in slide preparation.
- \LaTeX is a powerful program for formatting equations that can be used to embed equations into your PowerPoint presentation.
- Aurora (<http://elevatorlady.ca/>) is a nice program that brings up a \LaTeX window and allows you to enter an equation.



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Part II Technical Presentations Aurora and Beamer

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Aurora's \LaTeX Equation Editing Box

All-Pole Prony

■ Since $e(0) = x(0)$, then instead of minimizing

$$\min_{a_p(k)} \mathcal{E}_{p,0} = \min_{a_p(k)} \left\{ \sum_{n=1}^{\infty} |e(n)|^2 \right\}$$

we may equivalently minimize the error

```

\min_{a_p(k)} \mathcal{E}_{p,0}
= \min_{a_p(k)} \left\{ \sum_{n=1}^{\infty} |e(n)|^2 \right\}

```

◆ No the

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Beamer

- The full power of \LaTeX is available in presentations using the Beamer Class.
- Beamer is included in the full \MikTeX installation.
- You may design your own templates and color themes, but many very nice ones are available. (this talk was prepared with beamer using the Copenhagen theme with the beaver color theme).
- A beamer user's guide is available in the "Beamer Resources" tab on my web page, along with a Beamer tutorial by Charles Batts at the University of North Carolina at Greensboro.

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A Beamer Jumpstart

The preamble given below is all you need for a basic Beamer presentation, such as this one.

```
\documentclass[compress]{beamer}
\mode<presentation>{\usetheme{Copenhagen}}
\usecolortheme{beaver}
\usepackage{amsmath,amssymb}
\usepackage[english]{babel}
\title[]{Effective Presentations}
\author[M.Hayes]{Monson H. Hayes \
  {\small{\texttt{mhh3@gatech.edu}}}}
\institute[CAU-GT]{Chung-Ang University \
  Seoul, Korea \}[2em]
\begin{center}
  \includegraphics[width=0.25\hsize]{lion.jpg}
\end{center}
\date[November 08, 2011]{}
```

Insert your required packages, and the appropriate title information and you are all set.

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Outline for Professor Batts' Beamer Tutorial

Beamer Tutorial
Outline

Outline

- 1 About Beamer
- 2 Templates
- 3 Frames
- 4 Sections and Subsections
- 5 Text
- 6 Alignment and Spacing
- 7 Lists
- 8 Overlays
- 9 Tables
- 10 Frame Structures
- 11 Graphics
- 12 Themes
- 13 Transitions

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A Beamer Jumpstart

- After the preamble, there is a `\begin{document}`, which is followed by a `\frame{\titlepage}` to generate a title slide.
- Each slide begins with a begin frame command and ends with an end frame command.
- The optional `\section{}` command is used to create an index, such as the one at the top of this presentation.

```
\begin{document}
\frame{\titlepage}
\section{Introduction}
\begin{frame}
\frametitle{Introduction}
```

*** Insert Your Slide Material Here

```
\end{frame}
```

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Other Features

There are many features in Beamer, such as

- Overlays and transitions.
- Two column formatting.
- Two-up and four-up PDF files.

See the Manual or the Tutorial for details.

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Director of an Audio-Visual Presentation

- As the director of your own audio-visual presentation, you should keep in mind that there are **two** simultaneous streams of information that you are delivering to the audience:
 - 1 The oral presentation, with you as the presenter, and
 - 2 The visual presentation, the slides projected onto the screen.
- Make sure that the audience is focussed on the right information stream during your presentation.
- You do not want them reading a slide when they should be listening to you.
- Your slides should be able to be read **quickly and easily** so that the audience does not lose track of what you are talking about.

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Part III The Talk

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Speaking

- Thank the person who introduces you, but do not repeat your name or your affiliation.
- Speak clearly and loudly enough to be heard at the back of the room.
- Use the appropriate volume and speed during your talk, being louder and slower for important points.
- Vary your vocal inflection: Tempo, Quality, Pitch, and Volume. Do not speak in a dull monotone.

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Posture

- Face the audience.
 - Do not remain behind the podium (unless forced to by a podium microphone).
 - Do not lean on the podium.
 - Do not block the screen with your body or your shadow.
- Establish **eye contact**, smile appropriately, be confident and enthusiastic.
 - Do **not read** from your notes, the monitor, or the screen.
 - Do not stare at your shoes or your slides while you are talking.
- Keep your arms comfortably by our side. Make movements from the waste up, and use appropriate gestures.
 - Do not cross your arms in front of your body, or put your hand in your pocket.
 - Do not point with your finger.

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Laser Pointers

- If you are using a laser pointer, do not wave it around wildly or rapidly.
- Use it to point to an item, and move it slowly around the item of interest. You do not want to make someone dizzy following your laser.
- After you are done pointing to an object, turn the laser off, or put it down. You do not want people worried about being hit in the eye by the laser.

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The Delivery

- Use the slides to give you **cues** on what to say.
- Explain your slides.
 - For a graph, explain the axes, and what is being plotted.
 - For a figure, explain the various components.
 - For an equation, walk through it carefully and define the variables and explain any special notation.
- When describing specific things on your slide, walk up to the screen, if possible, and point at your slide (with your hand).
- Be gracious and honest.
 - When talking about the work of others, be gracious.
 - When talking about your own work be honest.
 - Be particularly honest about any weaknesses or shortcomings in your work. If your audience senses that you are not being honest, they can become aggressive and confrontational.

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Opening and Closing Lines

- The beginning and end of a talk are, in some ways, the most difficult.
- Memorize the first two and the last two sentences.
- Do not, however, memorize or read your talk.
- It is intensely boring and difficult for your audience to follow you when they are being read to.
- Don't ever start with a joke - in fact, don't tell jokes, they usually aren't funny.

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Practice Makes Perfect

- Practice, practice, practice.
- Your first practice talk may be terrible, your second one will be less terrible, your third practice talk will be acceptable, and, if you are lucky, your fourth practice talk will be good.
- You should give at least one of these practice talks to colleagues that don't know your work very well, thus simulating your eventual audience.

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Questions

- Be prepared for a question on any bullet on any slide.
 - Have a complete and thorough understanding of everything you present.
- Listen to the question and to what is being asked, and pause for a few seconds before giving your response.
- If you are unsure of the question, repeat the question to make sure that you understood it correctly. This also gives you some extra time to think of an answer.
- At a conference it is often difficult to hear the question at the back of the room, so repeat a condensed version of the question for those that didn't hear.

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Timing is Important

- Time your talk. You absolutely should not run late.
- A conference talk is fairly easy to time because questions are typically held to the very end.
- For a colloquium or job talk, it is more difficult to predict the timing, since you may be interrupted with questions.
 - To account for this variability, your talk should be somewhat fluid so that, if you are running late, there are some slides that you can skip over without disrupting the flow of your talk.
- If you are running late, do not try to cram in the last few slides by talking very fast.
 - Simply say "Since time is short, I will skip over this part. For those interested, please come talk with me afterwards."

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Questions

- Never be afraid to say "**I don't know.**" If you do not know the answer to a question, simply say "That is a very good question that I do not know the answer to, and something that I will need to think about."
- This can be followed-up with something that you think might speak to the question.
- This is far more preferable than trying to scramble for an answer and saying something incoherent.

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Thank-You

- Say "thank you" at the end of your talk so that the audience knows that you are done and that they should applaud.

Thank You!

