Preparing and Delivering Presentations

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... including material from J Nelson Amaral, M desJardins and others...
General Comments about presentations in general:

People are uni-processors: if their reading, their NOT listening. Therefore, it makes sense to write as LITTLE material on your slides as possible. You should avoid complete sentences; by using Bullets! You should use LARGE fonts. An be sure to also use many pictures!

Give a simple examples FIRST, before giving the formal definitions, theorems, etc. Then perhaps use that example to "instantiate" the definitions, etc. (Don't worry: people typically do an amazingly great job of generalizing from such examples. Most of the time.) Help them parse by splitting out phrases on separate lines.

Try to avoid technical terms, if at all possible. (Or at least give a simple example of the idea.

Be sure to re-read slides, and check!
Presentations

- People are uni-processors:
  - If reading, NOT listening ⇒ minimize text!
  - Don’t need complete sentences; use Bullets!
- Simple examples FIRST
  - ... before formal definitions, theorems, ...
  - use example to "instantiate" the definitions
- Easy to read fast:
  - Avoid technical terms
  - Include relevant Pictures!
  - Separate lines for each idea
  - Use LARGE fonts... colors are fun ... so is animation
- Proof-read!!
Which would you prefer?

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- Give a simple example FIRST, before giving the formal definitions, theorems, etc. Then perhaps use that example to "instantiate" the definitions, etc. (Don’t worry; people typically do an amazingly great job of generalizing from such examples.) Help parse by splitting out phrases on separate lines.
- Try to avoid technical terms, if at all possible. (Or at least give a simple example of the idea.)
- Be sure to re-read slide, and check!

Presentations

- People are uni-processors:
  - If reading, NOT listening ⇒ minimize text!
  - Avoid complete sentences; use Bullets!
- Simple examples FIRST
  - … before formal definitions, theorems, …
  - use example to "instantiate" the definitions
- Easy to read fast:
  - Avoid technical terms
  - Lots of Pictures!
  - Separate lines for each idea
  - Use LARGE fonts… colors are fun … so is animation
- Proof-read!!

http://www.gettyimages.ca/detail/78742884/Fuse
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Be sure to re-read slides, and check!

Hard to read color?
Too small?

No bullets...
Bad line breaks

Typos

Just skipped?

Why have this junk?? What does it mean?

... lighting? ... movement? ... monotone voice?

Context? Why am I saying this?

Move over...
Outline

- Preparing the presentation
  - Content: 
    \textit{What material to present?}
  - Form:
    \textit{How to show that material?}

- Delivering the presentation
  - Before presentation
  - During presentation

While focus is on \textit{Research} Presentations, similar ideas for \textit{Course} presentations
Why Have Presentations?

- Researchers / Developers / ...
  - Important to have ideas
  - Important to develop/validate ideas
  - Important to *disseminate* ideas
    - Publications
    - Presentations
      - locally: in lab, team, ...
      - non-locally: in workshops, conferences, ...

- Instructors
  - Present course material

...
Why are you here?

What types of presentations will you be presenting?

- Type of Audience
  - Peers?
  - Students?
  - ...

- Purpose?
  - Educate? Entertain? ...

- Prepared or Extemporaneous

- Visuals or not?

- Duration?

- ...

Audience Participation
Goal of Presentation

Possible Purpose(s):
- to entertain
- to inspire
- to persuade
- to inform or educate

Goal of Research Presentation:
- Say enough to get them excited... and
- motivated to read paper!

Goal of Educational Presentation:
- Emphasize high points of text
- Reinforce ideas
- Give examples
- Bring up auxiliary issues

http://toastofedmonton.shawwebspace.ca/pages/view/planning_a_presentation/
Types of Presentations

<table>
<thead>
<tr>
<th></th>
<th>Extemporaneous</th>
<th>Prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>w/ Visuals</td>
<td></td>
<td>this talk</td>
</tr>
<tr>
<td>w/o Visuals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Toastmasters
Presentation ~ Story

- Tell a story!!
- Should FLOW...
  - Beginning, middle, end
  - Not a shopping list!
- Structured, to answer...
  - Task itself
    - Def’n: What is problem?
    - Motivation: Why should audience care?
  - Results...
    - Why relevant? ...impressive?
- Conclusion
  - What do you want them to remember?

http://www.bbc.co.uk/scotland/education/wwww/buildings/standard/shopping/?item=list
Structure of Presentation

Think of how material should flow... perhaps

A. Opening
   - Captures the audience attention
   - Leads into the topic

B. Body
   - Point #1
     a. Statement
     b. Supporting material
   - Point #2
     a. Statement
     b. Supporting material
   - ...

C. Conclusion
   - Review / summary

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Prepare for your Audience

- Goal: for intended audience to understand material
- Know your audience!
  - If a “general audience”: Give the necessary background
  - If talking to researchers in your field: Don’t waste time on basics
- Imagine you didn’t know this material
  - What would YOU need to get it?
- Emphasize
  - what is important
  - (what you have done)
  - why they should care!
How Much to Say?

- What do you want intended audience to know, when done?
  - Say THAT!
  - Say ONLY THAT!
    - Everything you say should relate to this msg(s)!

- Having too much can be bad...
  - Superset of a good talk is NOT a better talk
What (not) to say ...

- Think of what you’d LIKE to hear...
  - High points; not irrelevant details
- Think of what you’d be able to UNDERSTAND in talk
  - Not complicated algorithms, complicated proofs, ...
- Proof?
  - If essential: Sketch: Yes Details: No
- Algorithm?
  - If essential: Sketch: Yes Details: No
- Tangentially related material – eg, things tried?
  - If audience would think about it ⇒ Yes (sketch)
    - If really obscure ⇒ No
- Unmotivated, hard-to-describe alg... that didn’t work?
  - No!
Timing

- Know how long you have
  - How long is the talk? Are questions included?
  - “A good heuristic is 2-3 minutes per slide”
    - Maybe... depends on your own pacing...
- Can *rarely* say *everything* about a topic, so don’t worry about skipping some things!
Content, per Slide

- Try to put ONE idea on each slide
  - ... corresponding to title
- If you have to split, use (as title)
  \(\text{Issue}\) #1
  \(\text{Issue}\) #2
- PPT slides are “free”
  - Can use multiple slides for one “theme”
    - ... if necessary
  - But don’t over-fragment!
Extra Slides

- If you ...
  - anticipate some questions
  - have tangentially related ideas
- have AUXILLIARY slides, at end of presentation!
- Use to answer questions ...
  ... if necessary
- ? Use later, for longer talk ?
Other Thoughts, wrt Contents

- Be sure **YOU understand the material**!
  - ... even if someone else’s slides!
  - Heuristic:
    - Think through to one level more depth than slides...

- **Re-read slides**
  - make sure they are understandable
  - make sure they “flow”

- **Ok to be cute**... but not too cute...
  - Never have off-color comments
Outline

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- Delivering the presentation
  - Before presentation
  - During presentation
Make it easy for Audience to Track

- Pictures better than words
  - ... if relevant!
- Use colors consistently
  - Eg, write everything that the user types, in blue
- A full slide of text can be overwhelming!
  - Use animation to present information incrementally.
- Use line breaks to help parse
- Notation: Do not use the same variable for many purposes... not even if in different fonts! Think of saying it: big_A vs little_a vs A vs B
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Make EASY to understand

- => vs ⇒
- a=<2,3> vs a = <2,3>
- * vs ×
- ε vs ∈
- != vs ≠

- Unambiguous
  - | vs 1; 0 vs 0
  - R vs ℝ

- Use spacing to help viewer

\[ A = f( b(x), g(y) ) \text{ forall } x, y \]
\[ A = f( b(x), g(y) ) \text{ forall } x, y \]
## Help Reader Understand Tables

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Height</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>25</td>
<td>M</td>
<td>5’11”</td>
<td>+</td>
</tr>
<tr>
<td>P2</td>
<td>33</td>
<td>F</td>
<td>5’6”</td>
<td>+</td>
</tr>
<tr>
<td>P3</td>
<td>15</td>
<td>M</td>
<td>5’3”</td>
<td>-</td>
</tr>
</tbody>
</table>
Easy to Understand

- YOU control the space in your slides...
  - Use it effectively!

- Make figures LARGE!
Yadda Yadda Yadda

- Blahs (332)
- P: 0.8836 ± 0.0928
Yadda Yadda Yadda

Blahs (332)
P: 0.8836 ± 0.0928
Graphs

- Label axes of graphs
  - Accuracy? Error? Inches? Miles? ...

- Do NOT use “Fig 1″ or “Table 2″
  - Unlike paper, viewer cannot go back ...
  - Readers will NOT remember ...
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Typos

Move over…

4.1
Make EASY to understand

- In general...
  If something helps readers understand **papers**, it probably applies here, to **presentations**!

- Define terms...
  - ... before use!
  - Use in example, to illustrate
Use RoadMap

- Roadmap slides
  - if >15 minutes
  - helps “wake people up”

- Organization
  - *Tell’em what you’re going to tell’em*
    - ≈1-2 minutes
  - *Tell’em*
  - *Tell’em what you told’em*
    - ≈1 slide (1 minute)
Series of Presentations

- When giving a SEQUENCE of related presentations
  - Eg, a course, or seminar series, or ...
- Have “landmark slides” covering ENTIRE series
- Take time at start of each lecture to...
  - ... set the context (wrt global “landmark slides”)
  - ... REVIEW previous material
- At end of each lecture:
  - summarize current situation
  - point to future material
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Timing Issues

- Manage time
  - Have “accordion slides”
  - If necessary, skip material
    - Plan for this...

- People best remember the LAST thing you said
  - ... Contributions, Future Work
  - ... What I did, What I did NOT do
  - ... Future Work, Contributions
Overhead Material?

- Give context
  - Course: chapter in text, auxiliary readings, ...
  - Research:
    - collaborators, funders
    - bibliography?? ... only your results, if job talk
  - Typically at end
  - List... do NOT summarized one-by-one!

- If use image/ideas from others (web):
  give citation ... get permission
  - Especially if slides are handed out
Just in case ...

- Real problem if
  - you lose your presentation...
  - your laptop dies ...

- Back-up copy!
  - Flash drive
  - On-line
  - ...

http://nelsoncentral.wikispaces.com/backingup
Outline

- Preparing the presentation
  - Content
  - Form
- Delivering the presentation
  - Before presentation
  - During presentation
Practice, Practice, Practice

- **Practice!**
  Give talk to
  - professional colleagues (students, advisor, collaborators)
  - friends, or spouse, or ...

- Include slide numbers (at least during practice)

- Never give a talk for the first time 😊
  - If inexperienced, practice your timing:
    - ~2 times on your own, to get the general flow
    - ≥1 dry run to work out the kinks
    - A run-through on your own, night before the talk

M desJardins  
http://leerydemonstrates.com/recusion
Just Before Presentation

- You are in charge!
  - Arrive early, to engineer your room
    - lighting
    - decide where to stand
    - move obstacles away
    - ...

- Details...
  - Plug in laptop
  - Turn *off* cell phone, messaging (Skype, ooVoo), ...
  - ...


Large Images!

- If necessary ... possible...
  MOVE projector to get LARGE image
Interact with Audience

- Don’t just read your slides!
- Interact with the audience!
  - Make eye contact
  - See if audience is tracking
  - Ask questions!
- Adjust your voice for emphasis ...
- Pause
Questions

- Questions from audience are typically good!
  - Helps audience “wake up”!
  - Helps you gauge how well they are tracking

- Feel free to “delay” answer
  - If relevant slides coming later
  - If off-topic: “take this off-line”

- If question is relevant, but not anticipated: Ok to pause, to think it through...

- Reward the questioner
  - ... even if the question is ...sub-optimal ...
Move Around!

- Move!
  - Do not just sit ...
  - You can (should!) move around
  - Don’t fidget
  - Point to PRESENTATION, not to your laptop!

- “Work the room” ... effective motions:
  - To emphasize something, or catch audience's attention:
    Walk closer to the audience and stop
  - To make a new point / change topic:
    Move to new location
  - When asking question:
    Walk towards the audience and wait for a reply ...
    after getting reply, return to original position
If you make a mistake ...

- Don’t fret, pout, get upset ...
- If critical...
  - just go back to problem and fix it!
  - or... fix it when necessary
- If not critical, just go on!
  - Perhaps mention this issue at END
  - ... or not ...
Nervousness

- Every speaker must confront Nervousness
  - aka speech anxiety, stage fright, platform panic, ...
- Feeling nervous before a presentation is healthy
  - ⇒ your presentation is important to you;
    you care about doing well
- Need to manage and control your nervousness
  ... to become an effective speaker!

http://toastofedmonton.shawwebspace.ca/pages/view/overcoming_nervousness/
Overcoming Nervousness

- Realize
  - you are an expert on this topic!
    - ... you know it better than the audience!
  - audience wants you to succeed!
- Prepare thoroughly
- Concentrate on the message – not the medium
- Gain experience

http://toastofedmonton.shawwebspace.ca/pages/view/overcoming_nervousness/
Some Useful Resources

- Toastmasters
  http://toastofedmonton.shawwebspace.ca/pages/view/tips_for_speakers/
  http://toastofedmonton.shawwebspace.ca/pages/view/i_speak_two_languages_body_and_/ 
- Mark Hill, “Oral presentation advice”
- Patrick Winston, “Some lecturing heuristics”
- Simon Jones, et al., “How to give a good research talk”
- Dave Patterson, “How to have a bad career in research/academia”
- Fun: Gettysburg Powerpoint Presentation: http://norvig.com/Gettysburg/
Organizational Overview

-87

Years

Now

1

0.9

0.8

0.7

0.6

0.5

0.4

0.3

0.2

0.1

0

New Nation

11/19/1863

http://norvig.com/Gettysburg/
Summary

Preparing material
- Tell a story!
- Think of what you want audience to know
  - Include that ... only that...
  - Be concise, focused
- Large print, easy to follow...

Delivering material
- Practice!
- Engineer your environment to facilitate communication
- Relax, and Enjoy!
Any questions??