CSCI 6730 / 4730: Giving Technical Presentations (and how to read)

Based on Simon Peyton’s Jones Article and Presentation (see reading list)

Motivation: Why is it Necessary (to present your work)?

The greatest ideas are worthless if you keep them to yourself.

- It is good for you!
- Helps you to communicate better
- Helps you understand better
- Helps you organize information & your thoughts (if needed).
- Helps you convey important ideas to others!

Pep Talk: Do it! Do It

- Do it right: Invest Time
- The Secret: It is a learned skill – no magic!
- The Key to Success: Practice, practice, practice!

The Process (and outline)

- Step 1: Get the information
- Step 2. Create the Presentation
- Step 3. Present the ‘Slides’

Be Open Minded
Step 1: Gather Information

- Download Paper
- Ask yourself questions?
  - Why am I doing this?
  - What is the paper about?
  - What is the main idea of the paper?
  - What is the solution?

More Questions to Ask

- How does the paper relate to the current state of the art?
- Is it relevant? Any key ideas that are timeless?
- Are you inspired (can you, should you be)?
- Does it generate new ideas? Did (does it) it inspire follow-up research?
- Was it convincing – what are the results?

The Second Pass: Actively Read

- Make a second pass! Get really into the paper.
  - Highlight important points
  - Take notes (in margins)
    - Questions
    - Examples
    - Definitions
    - Key Points

Step 1: Gather Information

- Skim the paper –
  - Read the abstract
  - Read the bold print
  - Skim the introduction
  - Skim the conclusion
  - Read the middle
After Reading

- Collect your thoughts
- Write a brief summary of key points
- Be critical
  - Assumptions
  - Methods
  - Reasoning
  - Results
  - Convincing?
  - Relevance?
- Write a more extensive summary!

Example Summary

- Key idea, what is the author trying to do?
- What is the approach and how is it original?
- Reflection: limitations and assumptions
- What is results, impact of paper
- Constructive comments to presenter.

Step 2: Create the Presentation

- How do I get started?
- You will need to user Power point slides or something similar! (you will need to turn an electronic copy in on what you present).
- Important – don’t copy paste from papers
  - Make it your own: “Own it.”
  - Easier to convey the information

What style to Use (or Not)?

- Use color to capture the attention of the audience, but not too much?
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What are the slides for?

- Organizes your thought, prompts you (add secret prompts, secret language)?
- Convey key points to your audience. Give your audience a feel about the paper and the general idea?
- Engage the audience, provoke them, challenge them?
- Notes to use after talk.

Step 2: Create the Presentation

- Assess your audience, Who are they?
  - What do they know, what do they need to know?
    - They read the paper?
    - They read all the papers in advance?
    - They already took OS the year before?
    - Are fresh / alert and ready to learn?

The Truth: The Real Audience

- They are you - or YOU before you read the paper.
- They may be tired – alert them!

Anatomy of a Talk

All good things come in three
1. Motivate (20%)
2. Key Idea (80%, repeat repeat)
3. There is no 3.
Motivation

- 2 minutes to engage before....
  » Why should I tune it?
  » What is the problem?
  » Why is it interesting?
  – Put yourself in their shoes!

The Key Idea

- You must identify a key idea. “What I did this summer” is No Good.
- Hierarchical –
  » Key ideas of talk
  » Key idea of each slide
- Be specific. Don’t leave your audience to figure it out for themselves
- Be absolutely specific. Say “If you remember nothing else, remember this.”
- Organize your talk around this specific goal. Ruthlessly prune material that is irrelevant to this goal.

Use Example(s) and Analogies

- Examples are your main weapon
- To motivate the key ideas
- To convey the basic intuition
- To illustrate The Idea in action
- To show extreme cases
- To highlight shortcomings

Example Outline

- Background
- The SASSY system
- Overview of epimorphism
- PI-reducibility is equal to MP
- Benchmarks and Results
- Related Work
- Conclusion and Future Work

But remember: You are not presenting a mystery novel – tell the audience the most interesting stuff first (the key idea)! Why is this paper exciting!
Need an Outline – Really? Why?

- Controversial topic!
- Outline – conveys near zero information before your motivation
  » Put ‘maybe’ an outline for orientation

Omit Too much Technical Detail

- Present specific aspects only; refer to the paper for the details (if it is too complicated)
  » Key aspects: Do Present –yes indeed
- By all means have backup slides to use in response to questions

- Know your audience!
- Onion Approach works well:
  » gently peel the layers of information layers, layers of interpretation, layers of meaning. Asking “Why?” and “What do you mean?” and “What else?” persistently and deeper as you go.

Technical Detail

Present Plots/Data

- Say what it is and what it shows (don’t assume audience can tell what is displayed)
  » Tell them the metric (and why it is important to illustrate) and Variables (and why are these the important variables)
  » AND What is held constant? (i.e., the assumptions)
- Highlight important characteristics – (bumps, trends)
  » Make sure you understand the data!
**Example: Performance**

- 0 agent is time stepped approach

**Do not apologize!**

- “I didn’t have time to prepare this talk properly”
- “My computer broke down, so I don’t have the results I expected”
- “I don’t have time to tell you about this”
- “I don’t feel qualified to address this audience”

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**Presenting your talk!**

- Go over slides the day of your talk (after practice)!
- Know the general outline in your head, visualize the order – and what you want to convey –
  - Look at the slides!

**Be your self! We are friendly**

- Have fun!
- Be enthusiastic!
Enthusiasm

- If you do not seem excited by your presentation, why should the audience be?
- It wakes ‘em up
- Enthusiasm makes people dramatically more receptive
- It gets you loosened up, breathing, moving around

The Jelly Fish Effect!

- Symptoms
  - Inability to breath
  - Can’t stand!
  - Brain is malfunctioning

Treatment

- You are not Alone!
  - Everyone gets nervous!

Being seen, being heard

- Point at the screen, the projector, be animated
- Make eye contact
  - Speak to someone you know
  - Speak to everyone.
  - Speak to someone at the back of the room
- Connect with the audience – try to listen to them and their questions.
Presenting your slides

A very annoying technique is to reveal your points one by one, unless...
there is a punch line.

Plan your talk and timing

Absolutely without fail, finish on time

- Audiences get restive and essentially stop listening when your time is up. Continuing is very counter productive
- Simply truncate and conclude
- Do not say “would you like me to go on?” (it’s hard to say “no thanks”)

Follow the Rule!

- What Rule?
  » Only three (1) Motivate – (2) and convey the key ideas and (3) there is no three
  » Repeat.

There is hope!

- You will attend 50 x as many talks as you give. Watch other people’s talks intelligently, and pick up ideas (appreciate) for what to do and what to avoid (learn, everyone makes mistakes).

The general standard is so low that you don’t have to be outstanding to stand out.