Visual AI
CPSC 533R

Extra Lecture. How to give a good talk

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based on How to give a good talk
by Christian Theobalt
Intention

- get the best grade?
- entertaining?
- tell a story?
- build tension?
- inform?
- teach?
- trigger future research?
- discuss?
- clarify?
- make people remember?  a bit of everything!

[YOLOv3 paper]
Who is in your audience?

- Sometimes: Researchers in related fields
  - ECE, Math, …

- Often: Researchers in your general field
  - computer science

- Mostly: Researchers in your specialization
  - computer vision, computer graphics, machine learning
  - newcomers, veterans, BSc, MSc, PhD, …

Make sure that you make it accessible for your audience, or choose the right audience for your presentation.
Structure

Basic rule

- Say what you are going to say
  - 1-3 main points in the introduction
- Say it
  - Give the talk – main insights / method
- Then say what you said
  - Summarize main points in the conclusion

Don’t try to build suspense and then unveil a surprise ending
Tell a story

Prepare your material so that it tells a story logically

- Subject: title, authors, acknowledgements
- Introduction / overview / motivation
- Method / approach
- Results / information / analysis
- Conclusion / future work / summary

What is motivated in the introduction needs to be explained in the method and validated in the experiments.

- not a novel / thriller!

More details:
http://www.cgd.ucar.edu/cms/agu/scientific_talk.html
How to structure the method section?

• Give an overview of your goals and methods
  • you can use web sources for figures
    • reference source!
  • for some papers there are great tutorials, github pages, and supplemental videos
    • check them out!

• Introduce the input and output
  • notation for the main quantities/variables
    • exactly one equation

• Explain the method at hand of simple examples
  • a sketch
  • input-output examples

• Focus on one aspect in detail
  • try to isolate independent contributions and focus on the most important
How to structure the related work section?

- focus on the particular research field in question (be narrow)
- pick 1-2 works representing the current state-of-the-art (could be newer than the paper you present if it is ‘historic’)
  - published in major venues (only an indicator)
  - published by major groups (only an indicator)
- don’t try to present them
  - just highlight the main result or conclusion
  - to be able to say what the new thing in this work is
  - explain details only if directly required to understand your presentation/paper
- can also be part of the evaluation
  - show improvements by side-by-side comparison
Result section

1x simple table

1x graphs

1x video

Many figures
Common mistakes

Too much material
- remember: You will never be able to tell the full story
- you must select pieces that are most relevant
- decide on what to keep based on
  - your audience
  - why do you give this talk
  - what do you want your audience to learn

No clear message
- importance of problem and its solution
- why and how
- main ideas, insight, and novelty over related work
  “Being a graduate student”: facilitate discussion, ideas for improvement
Is a slide needed or not?

Three important criteria

• is it important for the main points in the story?

• will the audience understand and value this point?

• will the audience remember?

Everything is somewhat important, but you have to cut!

• create backup slides for those aspects that you deem important but can’t fit into the main presentation
  (general advice!)
  • i.e. have slides for 15 min of presentation
    + additional content for 3 to 5 min discussion
How much math?

People are used to study equations, not to see them for 2 minutes on a slide

Equations should support your explanation, not harm it

Common mistake: too many / too few equations
• use them as little as possible…
• …and as much as needed
• don’t use them to impress people
• use only important equations, take time, explain properly

Use latex to generate equations
• Mac: LaTeX it (allows easy generation and copy paste to Keynote)
• Windows: IguanaTeX plugin for PowerPoint
Anything special for this lecture?

Focus your presentation on

- **Learning**: convey concepts and methods to the other students

- **Outlook**: Explain what makes this a good paper. What works, what doesn’t? What could I (grad student) be working on in the future?

- **Connecting**: put your work in context to lecture material, other presentations, and related work in the literature

- **Practice**: improve your own presentation skills

*In all of these cases, give reasons! Why is something important, why does it work, why the attained result good? …*
What else?

Recommended to use PowerPoint or Keynote
- open source tools exists but have many glitches
  - or do you know a good one?
- latex beamer puts the wrong incentives (equations)

Practice your talk
- in front of friends or colleagues
- don’t practice toooo often (you loose the energy)

Test the presentation equipment
- zoom or recording tools
- use a good mic

Ask for feedback!
- TA and others---not on the day before the presentation (you need time to incorporate suggestions)
Presentations in CPSC 533R

1. Submit your slides three days in advance on Canvas
   • you can still polish afterwards
2. Arrange for a meeting with TA
   • If you record (your choice), record the day before the presentation
     • PowerPoint file or .mp4 video
     • Send download link to the instructor and TA by mail until 11:59 pm
3. Be in time for your presentation
   • 10 minutes before the lecture start
4. Present, 15 min
5. Discussion ~15 min
   • don’t feel responsible to answer all questions, your discussion time should be 3-5 min.
   We want an open and general discussion in class.
6. Moderate the discussion of another paper
   (two days or a week later)