Writing papers and giving talks
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How to prepare a good presentation

- ▶ Do not be too ambitious.
- ▶ You are an expert, most people in the audience know less about the topic you will present.
- ▶ Your talk should finish on time.
- ▶ Do not put too much text on your slides.
- ▶ Whenever possible include images and graphs, instead of text.
- ▶ You should be able to explain *every* word that is on your slide.
- ▶ Practice! Practice! Practice!
    - ▶ If possible give the talk to a friend.
    - ▶ Talk to a mirror.

How to give a good talk

- Do not only read text from a paper.
- Talk freely.
- Look at the audience.
- Leave enough time for the audience to look at slides especially when presenting graphs and images.
    - Remember: they might see this for the first time.

Structure of your talk

- ▶ Title slide
    - ▶ your name,
    - ▶ title,
    - ▶ date.
- ▶ Overview slide: What will you talk about?
- ▶ Motivation,
- ▶ Results,
- ▶ Summary,
- ▶ References.

How to get started?

- ▶ Analyze the material given to you by your supervisors.
- ▶ Analyze your topic.
- ▶ If the material provided to you is not sufficient or you do not understand it, try to find more material:
  - ▶ somewhere on the internet,
  - ▶ in the library,
  - ▶ if you really did an effort and the above failed, consult with your supervisor.
- ▶ A good starting point is always Wikipedia. However, this is not a citable, scientific source.

Structure of a paper

- Title,
- (list of) authors,
- Abstract,
- Introduction,
- the stuff in between,
- Summary/Conclusion
- References

- Usually the title of your paper is the topic that was provided to you.
- If you change the title, make sure it is informative and provides some information about the topic you will discuss in the paper.

- The ad and trailer for the paper: it has to be an executive summary of your work in such a way as to attract attention and get the reader to read more.
- Informative, but short.
- Provide a *high level* description of the content of the paper.
- Self contained and not point to other parts of the paper.
- Should not exceed 200 words.

Introduction

- Provides clear motivation to questions studied in the paper.
- Provides a clear description of the content of the paper.
- Discusses related work.
- Should survey the whole paper, and therefore forward reference every important part.
- Should be 1-2 pages long.

Conclusion

- Should describe what you did **not** do.
- Describe what things are missing and where to look further.
- Should emphasize, why this work is important and represent your opinion about the topic.

References

- ▶ Have to be correct, complete, and accurate.
- ▶ Only add references that are really used in the paper.
- ▶ Cite in the paper where appropriate.
- ▶ Everything that is not your own, genuine work must be cited.
- ▶ Avoid citing webpages.
- ▶ Do not use Wikipedia in the references.

- Your paper should tell *one story* and should have a clear structure.
- Papers are not suspense thrillers, so you need to make sure the reader can follow your thoughts at all times.
- Start working early on your paper.
- Ask a friend to proof read it.
- The first friend is the spell checker.

Style

- ▶ Give a strong visual structure to your paper using.
  - ▶ sections and sub-sections
  - ▶ bullets
  - ▶ laid-out code
- ▶ Find out how to draw pictures, and use them.
- ▶ Use simple language.
- ▶ Use the active voice, passive voice kills the paper.
- ▶ Once you fixed a notation, do not change it.
- ▶ Do not overload notation.

References

- ▶ How to write a great research paper, Simon Peyton Jones, Microsoft Research, Cambridge, England
- ▶ How to write a paper, Oded Goldreich, Weizmann Institute of Science, Rehovot, Israel