How to Read,Present Papers

Caveats

- Statutory warning : Your advisor may not agree
- Only my opinions.
  Random thoughts, often in no particular order
- Use advise at your own risk
- I do not necessarily follow the advise all the time

Caveats

- This presentation ignores some of its suggestions
- Could be a good example of a bad talk

Omissions

- References at the end of the talk provide many suggestions not included in this talk

Summary

- Use common sense
- Learn from experience

Reading a Paper

Why read papers

- So you know what's happening
- Avoid reinventing the wheel
  - does happen commonly, too many wheels already
- Find interesting research topics

Why not to read papers

- Cannot read everything
- Should not read everything
  - too much junk out there
- Can suppress innovation
  - once you see solutions using a particular theme, often hard to think differently

Read or not to read, that is the question

- Read, of course
- Know what's important
- Know what can be ignored without significant loss of information

What to read

- Major conferences
  - CS journals are a few years behind, but still can be useful
- Tech reports from active research groups
  - need to know which groups to look up
- Survey / overview papers
  - ACM Computing Surveys
  - Magazines
    - CACM, IEEE Computer, Spectrum
    - more technical - IEEE Communications, …
    - newsletters - ACM SIGCOMM, ACM SIGMOBILE, ...

Sources of Information

- IEEE explorer
- ACM digital library http://www.acm.org/dl
- Conference websites
  - http://www.ieee-infocom.org/1998,1999,...
  - http://www.ieee-icnp.org/
  - …
- Google
- Major conferences
  - ACM SIGCOMM, MOBILECOM
  - IEEE INFOCOM, ICNP, ICC, GLOBECOM
  - SPIE/IEEE Opticomm

Sources of Information

- IEEE Communications Magazine
- IEEE Journal on Selected Areas in Communications
- IEEE/ACM Transactions on Networking
- IEEE Network Magazine
- Optical Networks Magazine
- Journal of Lightwave Technology
- IEEE Communications Letter
- Photonic Network Communications
- Optical Engineering Journal

What's in a paper

- Abstract
- Introduction
- Motivation
- Problem description
- Solution
- ...
- Performance Analysis
- Conclusions
- Future Work

How to read a paper?

Know why you want to read the paper

- To know what's going on (e.g., scanning proceedings)
  - title, authors, abstract
- Papers in your broad research area
  - introduction, motivation, solution description, summary, conclusions
  - sometimes reading more details useful, but not always
- Papers you may want to improve on
  - read entire paper carefully

What to note

- Authors and research group
  - Need to know where to look for a paper on particular topic
- Theme of the solution
  - Should be able to go back to the paper if you need more info
- Approach to performance evaluation
- Note any shortcomings

So this paper is in print ...

- Be skeptical
- If it sounds too good to be true, it often is

How to Present

How to present a paper

- Do unto others as you would have them do unto you

How to present a paper (at a conference)

Objectives, in decreasing order of importance

- Keep people awake and attentive
  - everything has been tried: play fiddle, cartoons, jokes
  - in most cases, such extreme measures should not be needed
  - humor can help
- Get the problem definition across
  - people in audience may not be working on your problem

How to present a paper (at a conference)

Objectives … in decreasing order of importance

- Explain your general approach
  - most productive use of your time
- Dirty details
  - most people in the audience probably do not care
  - a typical conference includes 30+ paper presentations, yours could be the N-th

Talk outline or not ?

- Useful when several ideas discussed in a single talk
- Short talks : Skip the outline
- Long talks : Include an outline
- Make the outline interesting

Text

You want people to (quickly) read your slides

- Use big enough font
- Do not put too much on one slide
  - don't want to keep them busy reading, instead of listening
- Use good color schemes

Not blue on yellow

Text

- Slide text need not be grammatically accurate
- Keep it short
  - OK to omit some details
  - fill them in when you present the paper

Practice makes perfect

versus

Practice can improve your presentations

PowerPoint, but not excessively

- Everybody has used PowerPoint
- No one is impressed by fancy backgrounds anymore
- Avoid using gratuitous animation
- Standard PowerPoint layouts can be useful
  - decent font sizes and color schemes

Picture is worth 1000 words

- Use illustrations/examples to explain complex algorithms
- Omit minor details, focus on the important
- They can read the paper to know the exact algorithm

Short talks

- May not have enough time to discuss all ideas clearly
- Focus talk on one or two ideas
- Summarize rest briefly
- Better to explain one idea well, than many ideas poorly

How to present a paper

- Avoid blocking the screen
- Point to the screen, rather than the slide on the projector

How many slides?

- Depends on personal style
- Rules of thumb
  - 1 slides for 1-2 minutes
  - Know your pace
- I tend to make more slides than I might need, and skip the not-so-important ones dynamically
- Anticipate technical questions, and prepare explanatory slides

How to present a paper

- Practice makes perfect (or tolerable)
- May need several trials to fit your talk to available time
  - particularly if you are not an experienced speaker

If English is your second language

- Accent may not be easy to understand
- Talk slowly
- Easier said than done
  - I have a tough time slowing down myself

No substitute for experience

- Nothing like a terrible presentation to learn what not to do
- Try to learn from other people's mistakes, instead of waiting for your own

Summary

- Use common sense
- Learn from experience
- Enjoy!
  - Papers can be fun

Useful references

- Speaker's Guide, Ian Parberry

  http://hercule.csci.unt.edu/ian/guides/guides.html
- The Best Method for Presentation of Research Results, Veljko Milutinovic

  http://www.computer.org/tab/tcca/NEWS/sept96/sept96.htm
- Many other guides on the web

Thanks !