

COMPSCI 732 S1 C

Software Tools and Techniques

Lecture 2: Reading and Writing Research Papers

Research Papers

- Journal paper
 - Typically 20+ pages
 - Full description of project and result
- Conference paper
 - Typically 10 pages
 - Results
- Workshop paper
 - Typically 10 papers
 - Results of work in progress
- Poster
 - Typically 10 pages
 - Work in progress report

Structure of Paper

- Abstract
 - Motivation
 - Aim of work
 - Results
- Introduction
 - Motivation
 - Aim of work
 - Results
 - Structure of paper
- Background
 - Enough to give adequate insight with references

Structure of Paper cont.

- Work undertaken
 - Describe what was done adequately
 - Describe results and meaning of results
- Related work
- Conclusion
 - Recap motivation
 - Recap results
 - Describe further work
- References
 - Alphabetic listing based on family name of the first author of any work cited in the paper
- Appendices
 - Useful detailed information

When reading a paper

- What is the motivation of the paper?
- What is the research question that the author is addressing?
- What work has the author done?
- What are the results?
- What other work has been done in this area?

Structure of paper

- Abstract
- Introduction
- Background
- Work undertaken
- Related work
- Conclusion
- References
- Appendices

Sample paper

- What is the motivation?
- What is the research question being addresses?
- What are the results?
- What was done?

When writing a paper

- Remember who the audience is
- Aim is to relay information, not to exhaustively explain the work
- **Plan** how the information can be explained clearly
- You don't have to start writing from the beginning of the paper. Perhaps write about the work done and results before writing the introduction.

Helpful resources

These resources refer to writing theses but are applicable when writing papers as well:

- <http://www.sce.carleton.ca/faculty/chinneck/thesis.html>
- <http://www.cs.auckland.ac.nz/msc/write.htm>

Reviewing a paper

- Scan a paper to gain a clear understanding of what the aim of the paper is and what the results are
- Read in more detail if you want to gain a deeper understanding of what was done and how it was done

How can you find papers?

- Check references
- Conference proceedings
- Journals
- In the library
- On the web
- DBLP (by author, keywords, conference, journal etc.)
<http://www.informatik.uni-trier.de/~ley/db/>
- Citeseer (good for finding related work, e.g. papers that cite this paper, similar documents)
<http://citeseer.ist.psu.edu/>
- Authors home pages or research group pages

Summary

- A research paper consists of a number of sections
- When reading a paper you should read it to answer questions such as
 - What is the research question being address?
 - What are the results?
- When writing a paper you should
 - Think about who the audience is
 - Plan carefully how you will present the material