



Conference Course, vt 98 (Datalogi för en aktuell tillämpning, D)

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Introduction

- ◆ Course takes conference format
- ◆ Conference language is English
- ◆ Accepted papers appear in proceedings

Theory

- How to do research
- How to write a scientific report
- How to make a presentation

Practice

- Research a topic
- Write an extended abstract/annotated bibliography
- Peer reviews
- Write a full/final paper
- Prepare a presentation
- Make a presentation



Questions

- ◆ How to do research
- ◆ How to write a research paper
 - Scientific character
 - Organisation of contents
 - Citations and references
 - Review process
- ◆ What is the difference between
 - Extended abstract
 - Annotated bibliography
 - Full/final paper
- ◆ How to prepare a presentation



How to do Research

- ◆ Select a topic of interest
- ◆ Collect information
- ◆ Read through the information
- ◆ Gather notes
 - Identify the references
 - Write summaries using your own words
 - Add critical comments and explanations
 - Keep track of your own ideas and thoughts
 - Relate to other information
- ◆ Archive and structure your material
- ◆ Narrow down your subject



Where and How to Get Information

- ◆ Use the library
 - Catalogues
 - Literature databases (i.e. INSPEC)
- ◆ Check references of publications
- ◆ Try WWW
 - Literature databases
 - Search engines
- ◆ Ask an expert
 - Fellow student
 - Supervisor
 - Post question in the news-net
- ◆ Inquiries / interviews
- ◆ Experiments / prototypes



What is Scientific Character 1

- ◆ Statements are motivated and/or provable
- ◆ Statements can be established in literature
- ◆ Many-sidedness
 - Discuss assumptions / approaches
 - Ask questions
 - Exemplify
- ◆ Careful distinction between
 - Facts and interpretations of facts
 - Your own original ideas and those of others
 - What you have done and others have done



What is Scientific Character 2

- ◆ Discussion of related work
- ◆ No “blind” trust
 - Critically evaluate facts
 - Check the original sources if possible
 - Even the “gurus” make errors (sometimes)
 - Do not take anything for granted
- ◆ Integrity
 - No plagiarism
 - No exaggeration
 - No “commercials”
 - Critically discuss even your own material
- Be honest and serious



How to Write a Research Paper

- ◆ Review, revise, and extend and your archive
- ◆ Analyse the topic
 - **What** are the key problems?
 - **Why** are those problems and for **whom**?
 - **Who** is your target audience?
- ◆ Make an outline of your paper
- ◆ Writing supports understanding
 - Write down your thoughts
 - Edit and reedit
 - Do not hesitate to redo even big parts completely
- ◆ Productivity usually 1-2 pages per day



Drafting a Paper

- ◆ Introduction
 - Describe the key problems on an appropriate level
- ◆ Contents organisation
 - List section- and subsection headers
 - Write at least one paragraph for each section- and subsection
 - Select references
 - Make outlines of figures and examples
 - Introduce “hooks” for “more to come”
- ◆ Maintain a list of open questions
- ◆ Make a schedule / to-do list



Example Outline

- ◆ Title and author
- ◆ Abstract
- ◆ Introduction
- ◆ Survey
- ◆ Results
- ◆ Summary and Conclusion
- ◆ References
- ◆ Appendices



References versus Citations

Research in cognitive science shows the importance of detailed and situated narratives ([Carrol et al 94]).

“Recent theory and methodology in cognitive science clearly reflects a growing and broadening awareness of the importance of detailed and situated narratives.” ([Carrol et al 94]).

- ◆ To give evidence for something
- ◆ To present your sources of information
- ◆ To distinguish between the original ideas of other’s and your own ones
- ◆ To show that you know the area of research
- ◆ To honour someone



Format of References

- ◆ No common standard
 - [1], [2], [3], ...
 - [Björk, Knight, and Wikborg 88], [Carrol et al 94], [Zobel 97], ...
 - [BKW 88], [Car⁺ 94], [Zob 97], ...
 - ...
- ◆ Required information in reference section

<ul style="list-style-type: none"> □ Authors □ Title □ Publication □ Date □ (Pages) 	<p>[2] J.M. Carrol, R.L. Mack, P. Robertson, M.B. Rosson: Binding Objects to Scenarios of Use, <i>Journal of Human-Computer Studies</i> 41, 1994, 243-276.</p> <p>[Zob 97] J. Zobel: <i>Writing for Computer Science</i>, Springer, 1997.</p>
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What to Cite and Reference?

- ◆ Reliable sources
 - Books
 - Refereed publications
 - No sales brochures
- ◆ Original sources
- ◆ Accessible sources
 - Published material
 - No confidential material
- ◆ Be very careful with web references
 - Reliability
 - Stability



Writing Style 1

- ◆ Be objective and accurate
- ◆ Have a simple, logical organisation
- ◆ Have one idea per sentence / paragraph
- ◆ Have one topic per section
- ◆ Use short sentences with a simple structure
- ◆ Avoid buzzwords and clichés
- ◆ Motivate and explain (why, what, how)
- ◆ Omit unnecessary information / details



Writing Style 2

- ◆ Explain all acronyms
- ◆ Do not use short verb forms, like I'm, can't, they're, ...
- ◆ Do not write have/has got (har fått)
- ◆ Do not use conversational opening phrases, like Well, You see, ...
- ◆ Be careful with singular and plural:
 - He/she/it is/was/has/does/...
 - They are/were/have/do/want/...



What is an Extended Abstract?

An extended abstract is a research paper whose ideas and significance can be understood in less than an hour

- ◆ **Not** simply a long abstract
- ◆ Should contain
 - Motivation, background, and conclusions
 - Comparison to related work
 - References
 - Examples / figures if necessary
- ◆ Need not contain
 - Details on proofs / prototypes
 - Future work



What is an Annotated Bibliography?

Bibliography:

A list of writings relating to a given subject.

To annotate:

To furnish with with critical commentary or explanatory notes.

➔ Commented reference section

D.F. Beer (ed.): *Writing and Speaking in the Technology Profession: A Practical Guide*, IEEE Press, 1992.

A miscellany of articles on different aspects of technical writing and oral presentations. Not all of it is valuable but the various viewpoints are interesting. ...

➔ See Zobel's textbook for more examples



Peer Reviews

- ◆ Distribute your work among peers
- ◆ Read and comment the work of your peers
- ◆ Meet with your peers and a supervisor
 - ❑ Participate in structured discussions
 - ❑ Ask questions
 - ❑ Explain approaches
 - ❑ Criticise (in a positive sense)
 - ❑ **Take notes**



Contacting your Supervisor

- ◆ Be prepared and take initiative
 - ❑ Prepare specific questions
 - ❑ Bring along a current version of your paper
- ◆ Take notes
- ◆ Reflect on results
- ➔ Use your and your supervisor's time effectively



Important Dates

Feb 11	Topic selection
Mar 11	Extended abstract, annotated bibliography, and planning
Apr 29	Full paper
May 6	Notification of acceptance
May 20	Final paper / resubmission
Jun 2	The Conference



Grading

- ◆ The grade depends on
 - ❑ Quality of the full paper
 - ❑ Participation in group meetings
 - ❑ Quality of the presentation
 - ❑ Participation at the conference

Accepted

- ❑ Submit final paper
- ❑ Appears in proceedings
- ❑ Prepare presentation
- ❑ Give presentation
- ❑ Grade: U, 3, 4, or 5

Not accepted

- ❑ Resubmit full paper
- ❑ Does not appear in proceedings
- ❑ No presentation
- ❑ Grade: U or 3



Preparing your Presentation

- ◆ Design your overheads carefully
 - ❑ Use big fonts
 - ❑ Avoid cluttered overheads
 - ❑ Use colour carefully
 - ❑ Make a script for your talk
- ◆ Use examples
- ◆ Prepare for questions
- ◆ You need 12-15 overheads for 25 minutes
- ◆ Test the readability of your overheads
- ◆ Test the presentation equipment



Overhead Design

- ◆ Do not use background graphics
- ◆ Use dark text on transparent overheads
- ◆ Use landscape format
- ◆ Use big fonts; This example is 16-point; This one is 12-point only
- ◆ Do not copy from books, papers, etc.
- ◆ Highlight your main points only
- ◆ Use only few different figures, graphics, icons, fonts, and colours together
- ◆ Do not use red and green together, nor either of these together with brown or grey



The Presentation

- ◆ **Do not read your overheads!**
- ◆ Do not hide parts of your overheads
- ◆ Do not try to prove that you know more than the audience
- ◆ Keep the time
 - ❑ Be prepared to omit some slides
 - ❑ Prepare some extra slides
- ◆ Test your talk at least once



Poster Design

- ◆ Posters will be mounted on self-standing boards or the wall
- ◆ Do not use more than 10 A4 sheets
- ◆ Prepare additional information
- ◆ Be prepared for questions
- ◆ Remember:
 - Posters should be self-explanatory. You might not be available for explanations.



Templates and Tools

- ◆ Outline and annotated bibliography
 - ❑ Your favoured editor
 - ❑ Use the formatting guidelines as a template
- ◆ Full and final paper
 - ❑ We recommend *Word*TM or *Framemaker*TM
 - ❑ We provide templates for *Word*TM
- ◆ Presentation
 - ❑ We recommend *PowerPoint*TM, *Word*TM, or *Framemaker*TM
 - ❑ We provide templates for *PowerPoint*TM



Literature

- ❑ J. Bell: *Introduktion till Forskningsmetodik*, Studentlitteratur, 1995.
- ❑ L. Björk, M. Knight, E. Wikborg: *The Writing Process*, Studentlitteratur, 1988.
- ❑ L. Björk, Ch. Räisänen: *Academic Writing*, Studentlitteratur, 1996.
- ❑ R. Johnson et al: Panel: How to Get a Paper Accepted at OOPSLA, *Proceedings OOPSLA'93*.
- ❑ A. Snyder: How to Get Your Paper Accepted at OOPSLA, *Proceedings OOPSLA'91*.
- ❑ K. Widerberg: *Att Skriva Vetenskapliga Uppsatser*, Studentlitteratur, 1995.
- ❑ J. Zobel: *Writing for Computer Science*, Springer, 1997.
- ❑ How to Give a Good Research Talk, *SIGPLAN Notices* 28 (4), Nov 1993.



For More Information

- ◆ Ask your supervisor(s)
 - ❑ Anders (bopspe@cs.umu.se)
 - ❑ Björn (bjorn@cs.umu.se)
 - ❑ Jürgen (jubo@cs.umu.se)
 - ❑ Lena (lenap@cs.umu.se)
 - ❑ Åsa (asa.sundh@univex.umu.se)
- ◆ Attend the group meetings
- ◆ Read books and papers
 - ❑ See previous overhead
 - ❑ See links on our web side
- ◆ Check the course's web pages
 - ❑ <http://www.cs.umu.se/tdb/kurser/TDBD10/Vt99>