Literature Study – Some Principles (II)

- Step 2: Find the references and collect the papers as PDF files
  - Important to have papers in electronic and not only in printed format
  - Enables you to archive papers, to distribute them, to print them, etc.
  - Look into the references (bibliography) of papers to find references of new papers
  - First tree structure, then increasingly back links to already found papers
  - Ideal goal: Links emanate from all leaf nodes back to inner nodes of the tree

- Step 3: Read at least the Abstract of all papers and determine semantic categories
  - Reading the Introduction can also be very helpful
  - Examples of categories: modeling, algorithmic design, index structures
  - Categories should be
    - mutually exclusive (no overlaps) and
    - complete (each article must belong to a category)
Literature Study – Some Principles (III)

- Step 4: Assign all papers to the categories determined

- Step 5: Read all papers in order to get the big picture
  - This does not mean that you have to understand each single detail
  - Details can be understood later
  - Rough understanding of problems, goals, and solutions needed
  - Big picture is needed to avoid duplicating existing research results
  - Big picture is needed to be able to produce novel research results

- Results of a literature study
  - are needed for writing Section 2 of a research or technical paper, PhD thesis, Master thesis, report, essay, etc.
  - Section 2 is usually titled “Related Work”.
Literature Study – Some Principles (IV)

- Purposes of the Related Work section
  - Provide the reader with an overview of
    - the problem solutions already proposed in the literature
    - weaknesses of these solutions
  - Bring your solution into a relationship with each existing solution
    - Compare your proposed solution with each existing solution
    - Indicate how your solution eliminates their weaknesses
    - This aspect is often forgotten in papers
Preparing and Holding a Presentation (I)

- No universal recipe available for holding a presentation
- But a number of mistakes can be avoided
- Presentation should have a personal style, that is, it also depends on the presenter’s character
- Be clear in your statements and explain your concepts
- Plan the outer circumstances of a presentation
  - How much time do I have? → Impact on the number of slides
  - How complex are the slides on average? → Impact on the number of slides
  - Who is the audience? → Impact on the complexity of the slides
    → Impact on the language of the slides
  - How much knowledge can I assume the audience has? → Impact on the degree of introduction needed
Preparing and Holding a Presentation (II)

- General aspects of slide design
  - Do not put too much text on a single slide
  - Only show keywords
  - Use figures as illustrations ("a drawing says more than 1000 words")
  - Use applications to illustrate concepts
  - Do not overwhelm the audience with formalism
  - Use appropriate, readable fonts: not Times but Helvetica, Arial
  - Use appropriate font size: at least 18 points
Preparing and Holding a Presentation (III)

- General aspects of presentation style
  - Practice your presentation several times
  - Stay with your front to the audience
  - Do not read slides! Do not read notes!
  - Speak with a clear and loud voice (low voice interpreted as weakness)
  - Do not speak in a monotonous and boring manner
  - Keep eye contact with your audience
  - Speak freely without any notes
  - Everything you show on a slide must be explained! Otherwise, don’t show it!