Academic Skills in Software Engineering (ASiSE)

Finding and Organizing Literature

Exercise
Tuesday, 5. DS, APB/E007
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- Includes the *problem definition* as crucial part

- Prepends a background of this research *(Why is it important?)*

- Summarizes the major problems and goals

- Appends a description of your evaluation *(success proof)*

Recurring structure of scientific papers in computer science

- Introduction / Motivation

- Background / Preliminaries / Contemporary Approaches

- Concept / Methodology

- Implementation / Realization

- Evaluation / Case Study / Illustration / Discussion

- Related work

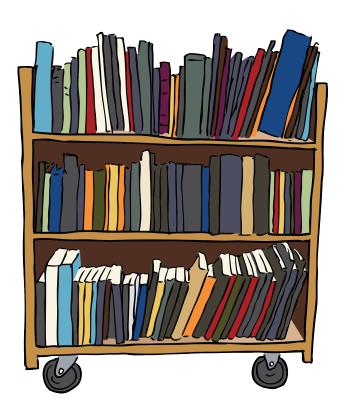- Conclusion / *Contributions*

Reading

Writing

Organizing

Images from OpenClipart.org (Creative Commons by Steve Lambert)

Common Tasks

- Find relevant / related publications
  - Query scientific search engines
  - Look up *BibTex* for specific publications from the web

- Investigate found publications
  - Skim papers
  - Make notes and hints
  - Organize downloaded files
  - Maintain a corresponding **bibliography** of *BibTex* entries

A Small Survey

- Q1: What tools do you use to read and annotate papers?

- Q2: *What tools do you use to organize your bibliography?*

- Q3: *What tools do you use to organize stored papers?*

BibTex

```
@inproceedings{kuehn2015choosy,
  title = {Choosy and picky: configuration of language product lines},
  author = {K{\"u}hn, Thomas and Cazzola, Walter and Olivares, Diego Mathias},
  booktitle = {Proceedings of the 19th International Conference on Software
                Product Line},
  year = {2015},
  organization = {ACM},
  pages = {71--80},
  citations = {1},
  file = {:./Kuehn/Thomas Kuehn_Choosy and picky - configuration of language
          product lines.pdf:PDF},
  howpublished = {\url{http://dl.acm.org/citation.cfm?id=2791092}},
  owner = {thomas},
  timestamp = {2015.09.07}
}
```

1) http://www.bibtex.org/

Finding Relevant / Related Publications

- Query scientific search engines
  When looking for complex search terms
  - Google Scholar   (free)   https://scholar.google.com
  - Elsevier Scopus   (registration)   https://www.scopus.com
  - Academia   (registration)   https://www.academia.edu
  - Sci-Hub   (illegal)   http://sci-hub. …

- Query publishers directly
  For a specific journal or conference in computer science
  - IEEE Xplore   https://ieeexplore.ieee.org
  - ACM Digital Library   https://dl.acm.org
  - Springer Link   https://link.springer.com
  - Elsevier ScienceDirect   https://www.sciencedirect.com

Investigating Found Publications

- Use appropriate reader

  Permit highlighting, comments, and annotations
  - Xournal, Acrobat Reader, Foxit Reader, Mupdf, …

- Use tool to manage your bibliography

  Organize, search, and annotate your BibTex entries
  - JabRef, BibDesk, EndNote, …

- Use one tool for both

  Manage, search, and comment both PDF documents and BibTex entry
  - Mendeley   (freemium)   https://www.mendeley.com
  - Zotero   (freemium)   https://www.zotero.org
  - Citavi   (freemium)   https://www.citavi.com

1) Find 10 related papers and retrieve their BibTex entries.

2) Annotate the problems, goals, solution, and evaluation for each one.

3) Manage your bibliography and export the 10 papers as BibTex file.

Hand in your BibTex files till Monday before the next Exercise!