Workshop on referencing with Latex / Bibtex

Overview

At the beginning of the workshop, there will be a short introduction on the general use of the LaTeX / BibTeX environment as a comprehensive and useful tool for scientific writing. After the introduction, you will carry out a task described on the following page. In short, the task is to compile a short text with four correctly included references. The workshop is held in English. You can do the task in Swedish or English.

Preparations to set up the Latex / Bibtex environment

We will demonstrate the use of LaTeX using the online LaTeX service "Overleaf" (www.overleaf.com). Overleaf provides easy and convenient access to LaTeX over the browser, without specific requirements on your computer other than a modern internet browser. A local installation is not required. To make use of the full functionality of Overleaf a free registration is required.

Preparations before the lab (for using Overleaf):

1. Go to www.overleaf.com and register or connect through an existing Google, Twitter, Orchid or IEEE account. Alternatively, install a running LaTeX environment on your computer.
2. Download the archive "KEX_Latex_TemplatePackage.zip" from the course page in Canvas, which contains the LaTeX templates you will need for the report.
3. On the main page in Overleaf click on "New Project" in the upper left corner and select "Upload Project" from the drop-down menu. Upload the zip-archive file "KEX_Latex_TemplatePackage.zip". (If not using Overleaf, unpack the archive and load the files into your LaTex editor.)
4. In Overleaf, the system should have compiled all script and style files and the generated PDF is displayed in the right half of the browser window.

☛ **You need to have a working LaTeX environment ready on your personal computer before the lab meeting! Otherwise you cannot participate.**
You are free to set up your own LaTeX environment or use any LaTeX environment, but note that you will not get assistance in the workshop for setting up such an environment.

More information about LaTeX

General: http://en.wikibooks.org/wiki/LaTeX
References to pictures and tables: http://en.wikibooks.org/wiki/LaTeX/Labels_and_Cross-referencing
Citations and BibTeX: http://en.wikibooks.org/wiki/LaTeX/Bibliography_Management

Teachers

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Task – referencing in Latex / Bibtex

In the workshop you will write one paragraph of the introduction for your report. In this paragraph you have to include **four references** to sources in a correct way. The four references must include **two scientific journal articles, one book,** and **one webpage**. Use the IEEE transaction format, which is automatically implemented in the Latex environment provided on Canvas (see preparation first page).

Follow these steps:
1. Search online for appropriate references using one or more <u>science search tools </u>like Web of Knowledge, IEEE Xplore, KTHB Primo or Google Scholar.
2. Export/transfer the reference to BibTex.
3. Write a sentence and include the reference in a correct way.
4. Compile your text and make sure a correct reference list is shown at the end of the document.

To get approval of the workshop task, the text and references must meet the criteria detailed below. Show your compiled text document to one of the teachers on your computer for approval or corrections. The task is to be carried out individually, requiring each student to bring her/his own computer.

1. Export references from internet search engines - examples

ISI Web of Knowledge (<u>apps.webofknowledge.com</u>)
Peer-reviewed scientific articles from journals and a few conference series only, paid search machine. ISI Web of Knowledge is accessible through KTH internet portals (e.g., eduroam).

- Search reference(s)
- Mark reference(s)
- Press "Export" and select "BibTex"
- Select full "Full record" under "record content"
- A plain text file (*.bib) is generated containing the reference information
- Copy the text from the file and paste it into the "KEX_bib_example.bib" in your project
- Remove the unwanted fields of the copied reference

IEEE Xplore (<u>ieeexplore.ieee.org</u>)
This engine searches the IEEE journal database (peer-reviewed journals and conference proceedings only).

- Search reference(s)
- Click on reference(s)
- Press the "Cite This" button above the author(s)
- Select Output Format: "BibTex" and click "Download" or "Copy"
- The reference information must then be **pasted** into "KEX_bib_example.bib"

KTHB Primo (<u>www.kth.se/kthb</u>)
This engine searches for research articles, books etc, but also for internal KTH reports such as master thesis projects or Licenciate or PhD reports.

- Search and click on reference
- Click on the "BibTex" symbol under ("skicka/spara referens" / "send/save citation") and then on "Download" (LADDA NER)
- A plain text file (Primo_BibTeX_Export.bib) is generated with the reference information
- Copy the text from the file and paste it into the "KEX_bib_example.bib" in your project

Google Scholar (<u>scholar.google.se</u>)
All types of research articles and books, open access for everyone.

- Search reference

- Click on the "-button and select "BibTex"
- The reference information is generated and must be pasted into "KEX_bib_example.bib"

2. How to correctly include references in the text in *IEEE transactions* format

Method 1: Referencing with author name(s):

This new discovery has first been reported by Brown [4], [5]. As mentioned earlier [2], [4]–[7] [9] had all tried with different experiment setups but failed to measure in the desired frequency range.

Also Smith [4], Brown and Jones [5], and Wood et al. [7] had done similar experiments but failed to deliver reliable results. *(Use "et al." if there are more than two authors)*

Kullen et al. [11] has clearly stated "This is a breakthrough". *(Direct citation of text passages marked with quotation marks)*

Method 2: Referencing without names:

As demonstrated in [3], these results are revolutionary. Also according to [4] and [6]–[9] this is a sensational discovery.

...integrated optical biosensors based on Mach–Zehnder interferometers [1], directional couplers [2], microring [3–5], and disk resonators [6] have been demonstrated...

3. Correct format in the reference list

REFERENCES

Basic format for scientific papers – BibTex tags *@article*, *@proceeding*:

[X] J. K. Author, "Name of paper," *Abbrev. Title of Periodical,* vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year.

Example:
[1] E. P. Wigner, "Theory of traveling-wave optical laser," *Phys. Rev.,* vol. 134, pp. A635–A646, Dec. 1965.

Basic format for books – BibTex tags *@book, @inbook, @incollection*:

[X] J. K. Author, "Title of chapter in the book," in *Title of His Published Book, xth* ed. City of Publisher, Country if not USA: Abbrev. of Publisher, year, ch. x, sec. x, pp. xxx–xxx.
Example:
[2] W.-K. Chen, Linear Networks and Systems. Belmont, CA: Wadsworth, 1993, pp. 123–135.

[3] G. O. Young, "Synthetic structure of industrial plastics," in *The importance of plastics*, 2nd ed. vol. 3, J. Peters, Ed., **New York**: McGraw-Hill, 1964, pp. 15–64.

Basic format for webpages – BibTex tag *@online*:

[X]Author. (year, month). Title. Company. City, State or Country. [Type of Medium]. Available: site/path/file

Examples:

[4] S. L. Talleen (1996, Apr.). The Intranet Architecture: Managing inform ation in the new paradigm. Amdahl Corp., CA. [Online]. Available: http://www.amdahl.com/doc/products/bsg/intra/infra/html [5] (2012, Dec.) The IEEE website. [Online]. Available: http://www.ieee.org/

Some LaTex/BibTex tips

- All used BibTex entries should be in the SAME .bib-file (KEX_bib_example.bib). So, copy and paste your references into this file, but do not include several .bib-files for different references.
- Entries in the .bib-file are used only if they are called with \cite{CITEKEY} in main .tex-file. There can be many entries in the .bib-file, which never show if not used.

Regarding Bibtex tags:

- *@book* does not show pages. Use it only for referencing an <u>entire</u> book.
- Otherwise use *@inbook* for referencing a page range within a book
- If the book is a collection of papers <u>with chapter titles</u>, use *@incollection* instead. This guarantees that both chapter title and book title appear in the reference list.
- For websites, use *@online* or *@electronic* (*@misc* does not produce the correct format)