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Introduction to LaTeX

bibliography

Contents

- thebibliography
- BibTeX
- Some tools
- BibLaTeX

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Bibliography

- A bibliography is a list of the literature that has been used for the work.
- Requirements:
  - Correct: All the information (especially authors, title, and year) should be correct.
  - Complete: All the literature that is referred to (and only this literature) should appear in the bibliography
  - Uniform: All the information should be displayed in the same style.
- http://www.ankehimmelreich.de/latex.php

Bibliography

- A bibliography can be:
  - included manually
    - Not really an option
  - embedded, using `thebibliography` environment
    - Simple method
    - Can be used for short reference lists, or when the formatting is very special
  - automatically generated from a database
    - Should be the way to go
- https://en.wikibooks.org/wiki/LaTeX/Bibliography_Management

Big picture

- Best practice: keep all of your references in a database.
- in LaTeX:
  - in the LaTeX document, indicate to include a bibliography and specify the style you want
  - cite using a simple command `(\cite{key})`
    - use a “key” linking what you want to cite with an entry in the database (.bib) file.
  - All of the formatting and inserting the actual citation will be taken care of.

https://jabranham.com/blog/2015/09/reference-management.html

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Big picture

- 3 bibliography management packages in LaTeX:
  - BibTeX (included in LaTeX by default),
  - natbib (a package based on BibTeX),
  - BibLaTeX.
- BibTeX and natbib (widely used, no longer developed)
- BibTeX is still the de-facto standard that most users know. Moreover, not all academic publishers (that support LaTeX) do support BibLaTeX
- Biblatex and biber (the future)
  - BibLaTeX provides a more flexible interface and a better language support

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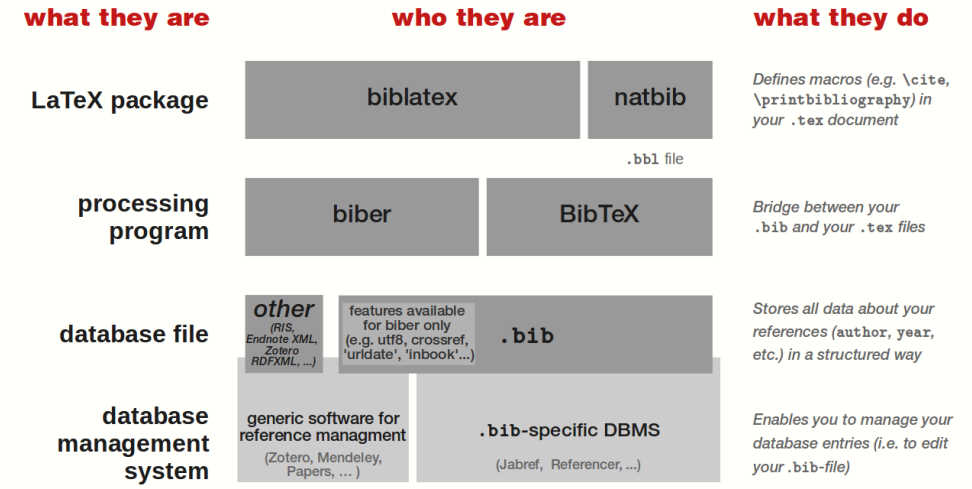
Big picture



- https://tex.stackexchange.com/questions/25701/bibtex-vs-biber-and-biblatex-vs-natbib

thebibliography

- Syntax

```
\begin{thebibliography}{widest_label}
\bibitem[label]{key} reference
...
\end{thebibliography}
```

  - *widest_label*: should be as wide as the widest label. Will help LaTeX to align the references correctly.
  - *label*: overrides the default label (a running number).
  - *key*: reference key used in text.
  - *reference*: author, title, etc. information (may include formatting).

thebibliography

- `thebibliography` environment produces a bibliography or reference list.
  - In the article style, this reference list is labeled "References";
  - in the report style, it is labeled "Bibliography".
- similar to the enumerate environment, except that items are associated with a `\bibitem` command and can be cross-referenced with the `\cite{key}` command.
- *File: demo_thebibliography_1.tex*

thebibliography

- By default, the bibliography items are given consecutive numeric labels, set in square brackets. [1], [2], [3], [4].
- Also allowed
  - `\cite{Erdos01,Simpson}`
  - `\cite[pages~2--15]{Knuth92}`
- Explicit labels.
  - Use mnemonic labels instead of the default numeric labels.
  - label the items [Er01], [GKP89], [Kn92], and [Si03]. Label this explicitely in bibitem:
    `\bibitem[Er01]{Erdos01} .... \bibitem[Si03]{Simpson} ....`
- *File: demo_thebibliography_2.tex*

Hands-on

- Use *handson_thebibliography_1,* compile it and check the output. Change the bibitem entries, such that a label is shown instead of a number

For more information about writing bibliographies see Goossens *et al.* [3].
For more information about writing bibliographies see Goossens *et al.* [3].
For more information about writing bibliographies see [2, 3].
For more information about writing bibliographies see Goossens *et al.* [3, Chapter 13].

Luckily, many text editors include the ability to switch end-of-line codes; some even do so automatically"[4]

References

[1] "LaTeX : a document preparation system", Leslie Lamport, 2nd edition (updated for LaTeX2e), Addison-Wesley (1994).

[2] "A Guide to LaTeX2e: document preparation for beginners and advanced users", Helmut Kopka and Patrick W. Daly, Addison-Wesley (1995).

Possible Workflow in Scientific Writing

- Collect / organize your references in Reference management software.
  - Endnote
  - Zotero
  - Mendeley
  - JabRef
  - Etc.
- Reformat the database to Bibtex/BibLaTeX format, if necessary.
- Use the database in LaTeX.

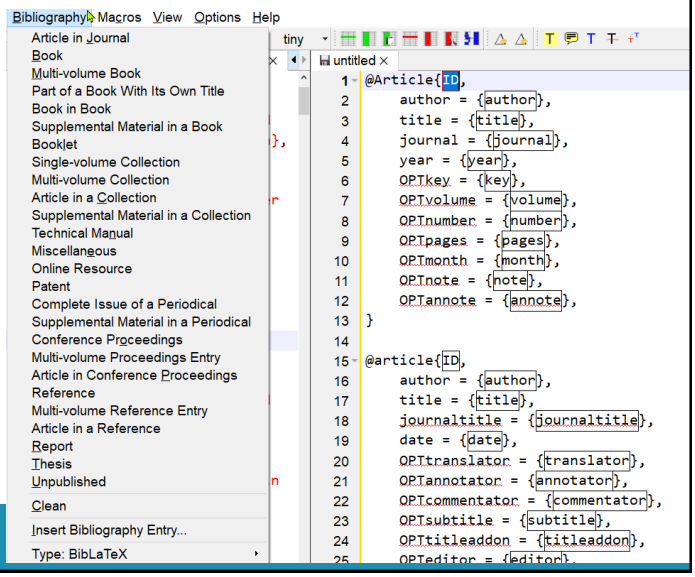
Working with a database: steps

- BibTeX/BibLaTeX translates bibliographic databases into a properly formatted citation list according to a pre-defined bibliographic style that you choose
- Inside LaTeX: required steps to set a bibliography using BibTeX/BibLaTeX:
  - Create a "BibTeX/BibLaTeX database“ (.bib)
  - Choose a bibliography style
  - Load the database(s)

Working with a database

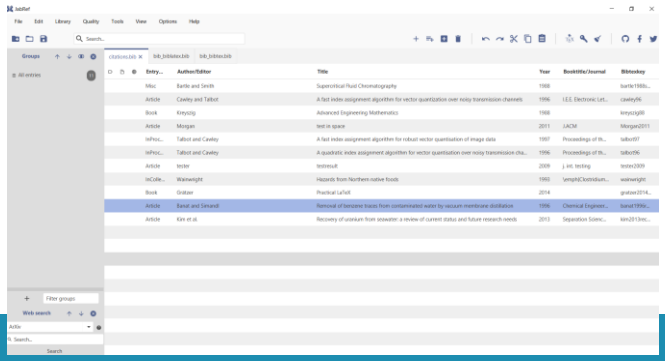
- DIY building the bib-file
  - Can be complex
  - Editor can help

```
@Article{tarladgis1960distillation,
  author    = {Tarladgis, Basil G and Watts, Betty M and
  Younathan, Margaret T and Dugan, Leroy},
  title     = {A distillation method for the quantitative
  determination of malonaldehyde in rancid foods},
  journal   = {Journal of the American Oil Chemists'
  Society},
  year      = {1960},
  volume    = {37},
  number    = {1},
  pages     = {44--48},
  publisher = {Springer},
}
```



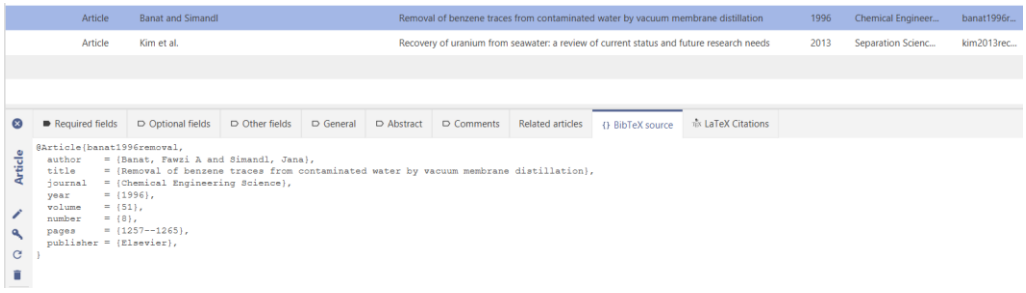
JabRef

- A bibliography reference manager. A GUI front end to manage BibTeX files.
- Cross-platform
- The native file format is BibTeX, the standard LaTeX bibliography format.



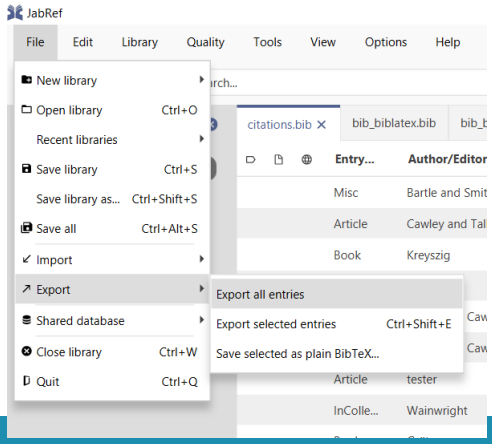
JabRef

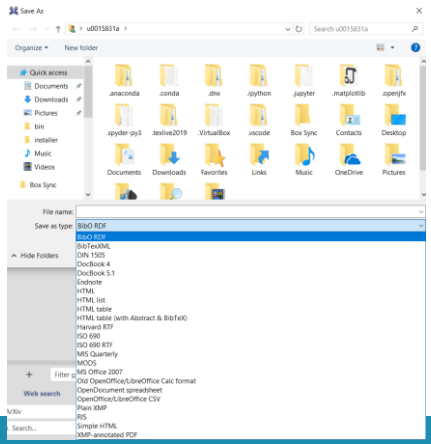
- Paste the BibTeX code into the BibTeX source field
- Or edit the *.bib file



JabRef

- JabRef can export files that can be imported into EndNote.

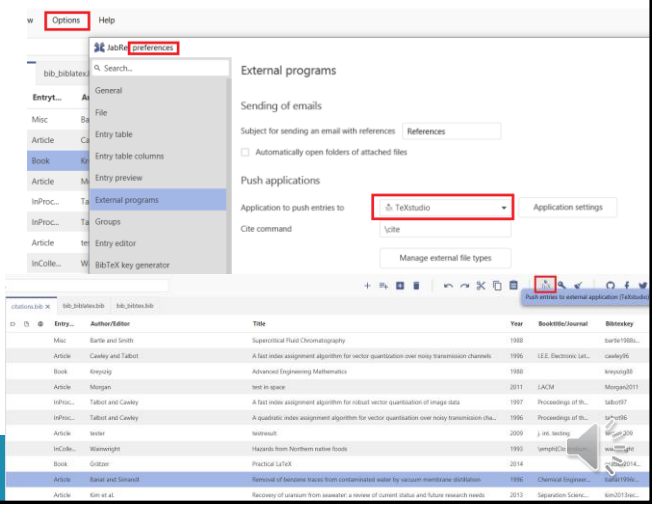




TeXstudio & JabRef: Cite while you write

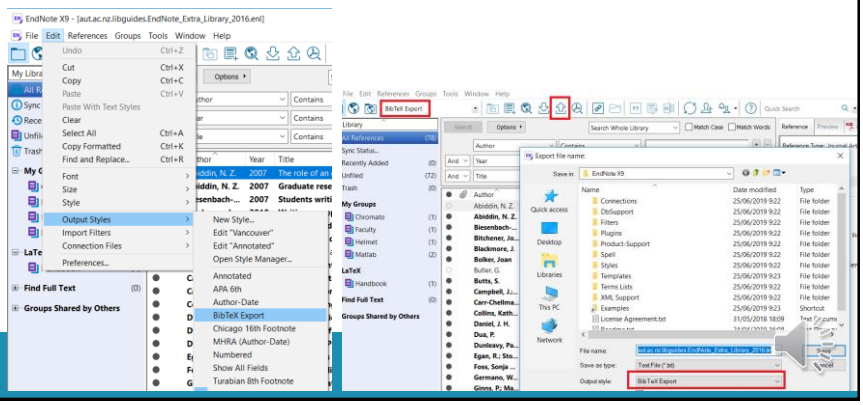
- Select in JabRef the document **ctrl + k**
- Paste the citation with **ctrl + v**

- Push citation



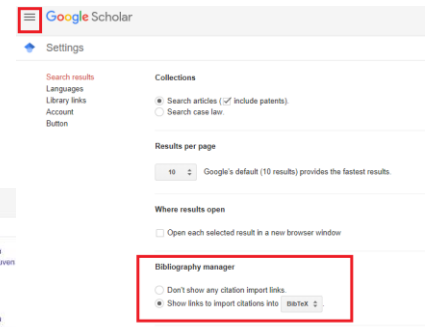
EndNote & BibTeX

- Exporting from EndNote to BibTeX
- Select the output style (Edit > Output Styles > Output Styles Manager)
- Export
- Change the extension .txt to .bib



BibTeX & Google Scholar

- https://scholar.google.be
- Settings: scholar preferences
- Select BibTeX



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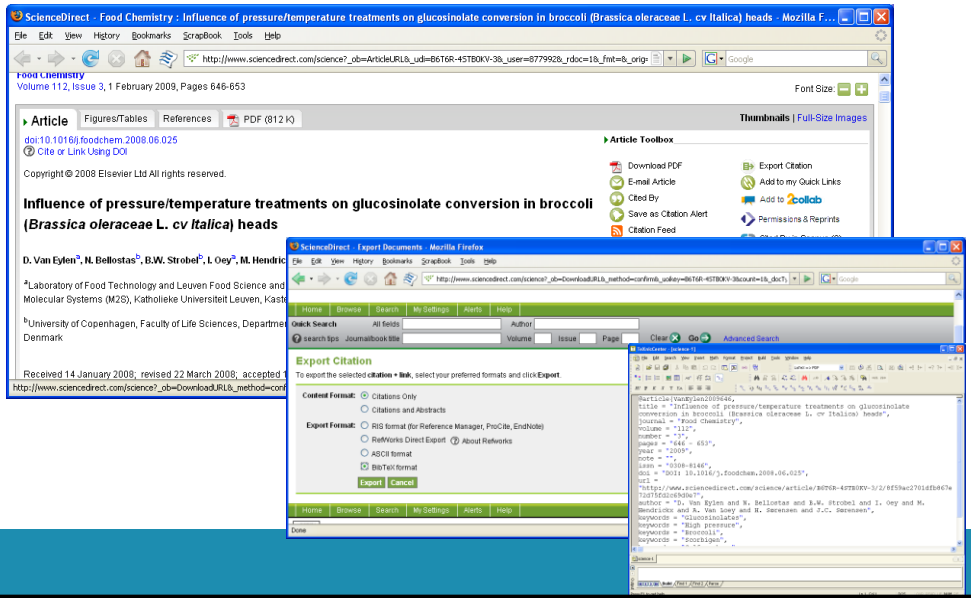
BibTeX & E-sources



Basic usage / commands

	BibTex	BibLaTeX
Packages Needed	None	biblatex
In document command for citation	\cite{bibID}	\cite{bibID}
Specify bib files Specify the filename(s) in	\bibliography (different bibfiles separated with comma, no spaces)	\addbibresource (addbibresource for each bib file)
Bibliography styles	Use command (place in body): \bibliographystyle{stylename} Common Stylenames: abbrv acm alpha apalike ieeetr plain siam unsrt	Optional Argument of \usepackage: \usepackage[style=stylename,]{biblatex} Common Stylenames: numeric alphabetic authoryear authortitle verbose reading draft
Print bibliography command	\bibliography{bibfilename}	\printbibliography

http://guides.nyu.edu/c.php?g=601858&p=4198226

What has BibTeX/BibLaTeX to offer?

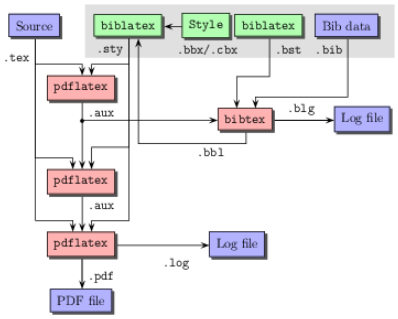
- Have the bibliography in a separate file and reuse it with every LaTeX document.
  No need to rewrite the bibliography every time.
- BibTeX only shows the resources which have been referenced using the `\cite` command, in addition to other resources which have not been explicitly referenced but have been enforced to display using the `\nocite` command.
- Entries are consistently formatted (provided the database is consistent)
- Graphical user interfaces exist for editing .bib (Bibliographic Information File) files (JabRef)

BibTeX

- The reference section and individual references are created according to the given bibliography style.
  - `\bibliographystyle{citation style}` defines the style
  - `\bibliography{data files}` includes the references
- BibTeX automatically includes all cited references and includes them in the reference section.
  - Citations are included in the text using
    `\cite{label}`
  - Additional references can be included in the reference section using
    `\nocite{label}`

Creating output

- To create references, run the sequence:
  - latex
  - bibtex
  - latex
  - latex



- *File: demo_bibtex_1.tex*

BibTeX styles

- https://www.overleaf.com/learn/latex/Bibtex_bibliography_styles
- `plain` Sorts entries alphabetically, with numeric labels.
- `abbrv` First names, month names, and journal names are abbreviated.
- `acm` Names are printed in small caps. alpha Alphanumeric labels, e.g., `Knu66'.
- `apalike` No labels at all; instead, the year appears in parentheses after the author. Should be used in conjunction with `apalike.tex' (plain *TeX*) or `apalike.sty' (La*TeX*), which also changes the citations in the text to be `(*author*, *year*)'.
- `ieeetr` Numeric labels, entries in citation order, IEEE abbreviations, article titles in quotes.
- `unsrt` Lists entries in citation order, i.e., unsorted.

Hands-on

- Use the file *handson_biblio_1,* compile and check the result.
- Change the style of the referencing.
- Add more text and references, use also the `\nocite` command

BibLaTeX

- The `biblatex` package is a reimplementation of LaTeX's bibliographic facilities.
- The formatting of the bibliography is governed by LaTeX commands instead of selecting a BibTeX style (`\bibliographystyle`).
- uses `biber` instead of `BibTeX` to process the bibliographic database and sort the entries.
  - Legacy BibTeX is also supported, but with a reduced feature set.
  - biber is the new parser for .bib files (replacement for BibTeX)

BibLaTeX

- Load the package biblatex
  - `\usepackage{biblatex}`
- Specify the bib file(s) with `\addbibresource` (multiple lines when using multiple files)
- Insert a citation with `\cite`
- Insert the bibliography with `\printbibliography`

BibLaTeX

- different citation commands:
- `\cite` - the most basic one. Prints without any brackets except when using the alphabetic or numeric style,
- `\parencite` - prints citations in parentheses except when using the alphabetic or numeric style when it uses square brackets.
- `\footcite` - puts the citation in a footnote.
- *File: demo_biblatex_1.tex*

BibLaTeX

Style	Command	Result
authoryear	\parencite{fg}	(Fothergill, 1929)
authoryear	\textcite{fg}	Fothergill (1929)
authoryear	\footcite{fg}	1
numeric	\cite{fg}	[42]
alphabetic	\cite{fg}	[Fot29]
authoryear	\cite{fg}	Fothergill 1929

http://latex.silmaril.ie/formattinginformation/xrefs.html#citcomm

- http://dag.at.ifi.uio.no/public/doc/biblatex-guide.pdf
- http://www.dickimaw-books.com/latex/thesis/html/biblatex.html
- https://guides.library.yale.edu/bibtex/biblatex-biber
- http://www.uakron.edu/dotAsset/2f7e00a5-3bb4-42b5-96c0-e16e0fb971d6.pdf
- https://3d.bk.tudelft.nl/hledoux/blog/fiddling-biblatex/