How To Cite (with BibTeX)

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Using BibTeX

BibTeX is TEX's citation manager. Given a file containing bibliographic information, it will;

- Insert citations like [Rice, 2008] in your document, in place of `\cite{rice:2008}` in the source code
- Construct a bibliography at the end of the document, in whatever format you desire (e.g. Vancouver, Harvard)
- Automatically re-label everything if, during revision, you include new references, or re-order references, or correct typos in existing references

Once you have such a file, its contents can be used again in any other document; this is a **huge** time-saver. (I've been using and expanding `KenRefs.bib` since 1998)

Using BibTeX: file structure

Bibliography files (with `.bib` extensions) are text files with entries like the following;

```
@article{Cox:regr:1972, #this is the 'citation key'
    author = {Cox, D. R.},
    title = {Regression Models and Life-tables
(with Discussion)},
    year = {1972},
    journal = {Journal of the Royal Statistical
Society, Series B: Methodological},
    volume = {34},
    pages = {187--220}
}
```

- The citation key should be sane, short, and memorable
- Current Index to Statistics enables cutting/pasting all of this, for many articles – another huge time-saver

Using BibTeX: file structure

Some standard LaTeX rules apply;

- White spaces don't matter
- Closing parentheses and commas do matter
- Typos results in irritating error messages

Some non-standard rules;

- Separate authors by `and`
- When citing > 1 paper, separate their keys by commas **only** (no whitespace)
- Some 'fields' are required, e.g. omitting an article's `title` will lead to an error message.
- Omitting e.g. publisher address should just give a warning
- Capitalize names yourself; protect lower-case with e.g. {de}Villiers

Using BibTeX: making citations

In your LaTeX source code, use `\cite{keyname}` wherever you want the citation to appear

- Most times, use ~ `\cite{keyname}`, to enforce a space between the preceding character and e.g. '(Rice, 2008)'
- See also `\nocite{keyname}`, which 'silently' adds a reference to the bibliography (This line of source code includes a `nocite` citation of Cox's 1972 paper – so it appears in the references, but not here)
- In the preamble, declare `\bibliographystyle{plain}`
- At the end of the source code, `\bibliography{kenrefs}` to get the bibliography (note no `.bib` extension)

Using BibTeX: making citations

LaTeX makes a separate file of bibliographic information, which is updated as LaTeX 'compiles' your source file sequentially. Therefore, to inegrate your document and this information;

1. LaTeX your file – to set up required citations
2. Run BibTeX – this constructs a `.bbl` file for your document
3. LaTeX your file again **twice**

Realistically, the last changes you make to drafts are to e.g. typos, not references. If you run BibTeX after you've finished citation-related edits, you will run LaTeX enough times anyway.

Using BibTeX: unusual citations

Not everything you'll cite is a journal article;

- See classes `@book`, `@inproceedings`, `@misc` etc
- Web pages can be cited, but whenever possible cite something on paper
- `R` gives you its BibTeX entry using `citation()`, or e.g. `toBibtex(citation("sandwich"))`
- When citing books for specific points, give the page(s) in the main text, e.g. Casella and Berger (2001) pp 166–168. When citing a chapter or other large chunk of a book, use the `@inbook` class.

Using BibTeX: unusual citations

A couple of other formats of citation;

- `\citet` give a 'textual' citation; `\citet{jon90}` produces Jones et al. (1990)
- `\citep` give a 'parenthetical' citation; `\citep{jon90}` produces (Jones et al., 1990)
- These can be useful when talking directly about a book or paper – rather than about the *result* contained in that book or paper
- They are both part of the `natbib` package, which does not play nicely with `beamer` ... and so are not illustrated here
- See also the `biblatex` package, which can do textual and parenthetical citations, and many other things

Using BibTeX: what to cite?

For methods work, consider whether to cite;

- The paper that give the source of the general idea (e.g. Neyman & Scott (1946) showing by example that not all MLEs are consistent)
- A paper, book or textbook that explains the idea, and how it applies to whole areas of research (e.g. Casella and Berger)

If citations indicate 'this statement is justified', the latter is most helpful. For scholarly literature reviews, get near(er) the source.

When citing, try to have the paper/book open in front of you

References/Recommended Reading

Some example BibTeX output;


Cox, D. R. (1972).
Regression models and life-tables (with discussion).
Journal of the Royal Statistical Society, Series B: Methodological, 34:187–220.


Ehrenberg, A. S. C. (1982).
Writing technical papers or reports.
The American Statistician, 36:326–329.


Gopen, G. and Swan, J. (1990).
The science of scientific writing.
American Scientist, 78:550–558.

References/Recommended Reading


Halmos, P. (1970).
How to write mathematics.
L'Enseignment Mathematique, 16:123–152.


Higham, N. J. (1993).
Handbook of Writing for the Mathematical Sciences.
SIAM [Society for Industrial and Applied Mathematics].


Rice, K. (2008).
Equivalence Between Conditional and Random-Effects Likelihoods for Pair-Matched Case-Control Studies.
Journal of the American Statistical Association, 103(481):385–396.