

Citing and referencing in LaTeX - Using BibTeX

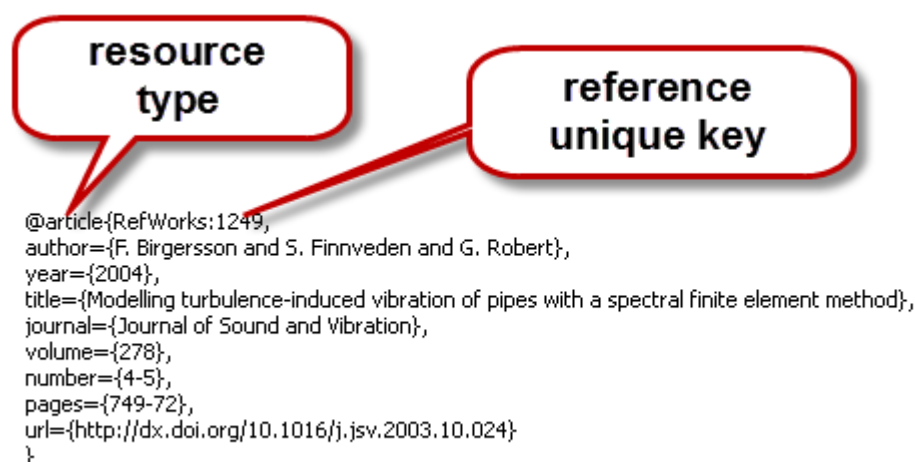
Note: The following website provides much useful information:

http://en.wikibooks.org/wiki/LaTeX/Bibliography_Management

Rather than include reference details for your document within the document itself you can store them in separate BibTeX database files (.bib extension). Advantages to doing this include:

- Once stored in a .bib file, a reference can be reused in future documents (you may choose to maintain one master .bib file or a series of .bib files)
- Many databases and reference management softwares allow automatic export of reference details as BibTeX files (in some cases bulk export of multiple references is possible)

A typical BibTeX record looks like this:



Note: quotes (") may be used around data instead of curly brackets.

1. Inserting citations and generating a reference list

Example:

```
\begin{document}  
  
Airplanes are by no means the only application of aerodynamics \cite{RefWorks:1248}. The air flow over an automobile, the gas flow through the internal combustion engine powering an automobile, weather and storm prediction \cite{RefWorks:1245}, the flow through a windmill, the production of thrust by gas turbine jet engines and rocket engines \cite{RefWorks:1244}, and the movement of air through building heater and air-conditioning systems are just a few other examples of the application of aerodynamics \cite{RefWorks:1249}.  
  
\bibliographystyle{unsrt}  
\bibliography{references}  
  
\end{document}
```

- To specify the output style of citations and references - insert the **\bibliographystyle** command e.g. **\bibliographystyle{unsrt}** where unsrt.bst is an available style file. Basic LaTeX comes with a few .bst style files; others can be downloaded from the web

- To insert a citation in the text in the specified output style - insert the `\cite` command e.g. `\cite{1942}` where 1942 is the unique key for that reference. Variations on the `\cite` command can be used if using packages such as natbib (see later)
- A Vancouver style (numbered citations, reference list in ordered cited) can be achieved with `\bibliographystyle{unsrt}`. Note: `url=` field information does not pull through to the reference list. More flexible citing and referencing may be achieved by using other packages such as natbib (see later) or Biblatex
- To generate the reference list in the specified output style - insert the `\bibliography` command e.g. `\bibliography{references}` where your reference details are stored in the file `references.bib` (kept in the same folder as the document). Place the command where you want the reference list to appear. You can refer to multiple `.bib` files e.g. `\bibliography{references1,references2}`

2. BibTeX files generated from databases and reference management software

Much time and effort can be saved by automatically generating BibTeX files through bulk export of multiple references either direct from databases or from reference management software. This automatic process may cause some issues and require you to tidy up the `.bib` files. Below are some suggestions to help with this:

- LaTeX special characters (`$`, `%`, `_`, `&`, `\`, `^`, `{`, `}`, `#`, `~`) present in a `.bib` file can create problems during typesetting. To avoid this, all these characters should be prefixed with the `\` character. Use a text editor such as Notepad or TeXworks to Find and Replace e.g. replace `$` with `\$`
- The `.bib` file is likely to contain extra fields of information not required for the actual reference. Some of these may pull through into the reference e.g. Notes field. It is recommended to remove this information from the `.bib` file
- Retaining capitalization. Some bibliography styles strip out capitalization (except for first word) in fields such as the title field; this can be a problem if you want to preserve e.g. acronyms. To preserve capitalization, edit the `.bib` file and enclose the specific text (whole not partial words) in curly brackets:

e.g. `title={Study of incompressible {MHD} flow in a circular pipe with transverse magnetic field using a spectral/finite element solver},`

Note: If using Refworks or Endnote, please see separate guides for more information.

3. Natbib

The natbib package allows more flexibility in terms of citing and referencing styles, including Harvard style.

Example citing and referencing formats:

Vancouver (numerical style): Use commands `\usepackage[numbers]{natbib}` (in preamble) and `\bibliographystyle{unsrnat}`

Harvard (author style): Use commands `\usepackage{natbib}` (in preamble) and `\bibliographystyle{agsm}`

For more detailed information see separate guides for example Vancouver and Harvard formats.