# Citing and referencing in LaTeX: BibTeX and JabRef support.

**Contents.**

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## Part A: BibTex

### What is BibTex?

BibTeX is a tool that you can use to help you create your bibliography in LaTeX. BibTex enables you to store your references in a separate **.bib** file outside of your document rather than listing them in the main .tex file. Your BibTex file will contain all the information you need to cite your source.

Advantages:

- Once stored in a BibTeX file, a reference can be re-used in future documents
- Automatic export from databases.

### How do I create BibTex files?

You can automatically generate your .bib files by exporting references from databases and search tools such as LibrarySearch and Google Scholar. Major databases often allow bulk export of selected records in one operation (to see a list of databases you may find useful for your subject, go to *Intranet > Libraries > Information resources by subject > Mathematics).* It is also possible to manually create your .bib file if you have a printed source or no option for auto-export.

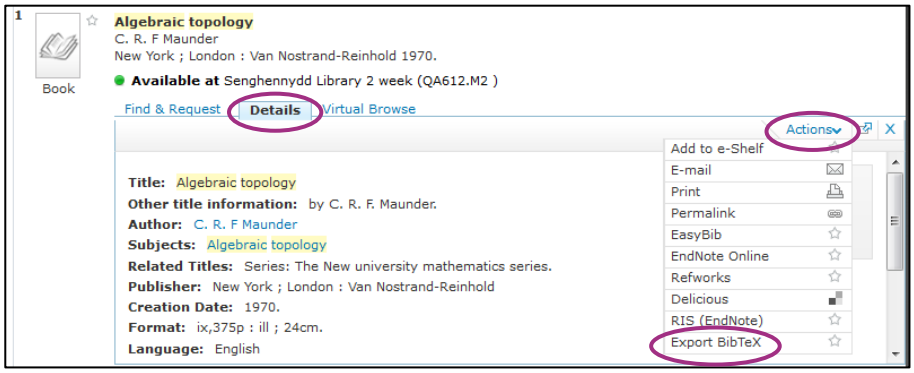
The auto-export process is similar for most databases:

- Select your item(s) for export e.g. via a tick box
- Select the export/download option and choose BibTeX as the output format
- Save the download file (include .bib after the filename if the save option doesn't give this option).

Exporting references from databases will save you a lot of time.

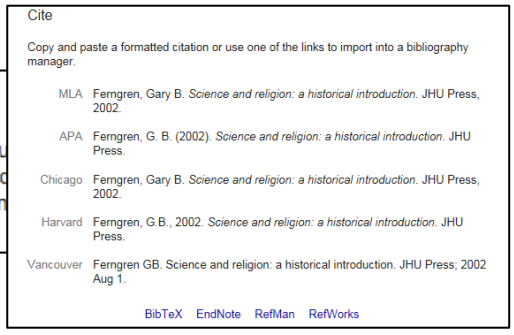
**Example 1: Exporting from LibrarySearch**

When you have found a record you would like to create a .bib file for, select the **Details** tab, then **Actions**, then click **Export BibTeX**. In the pop-up window, make sure the encoding is on UTF-8.



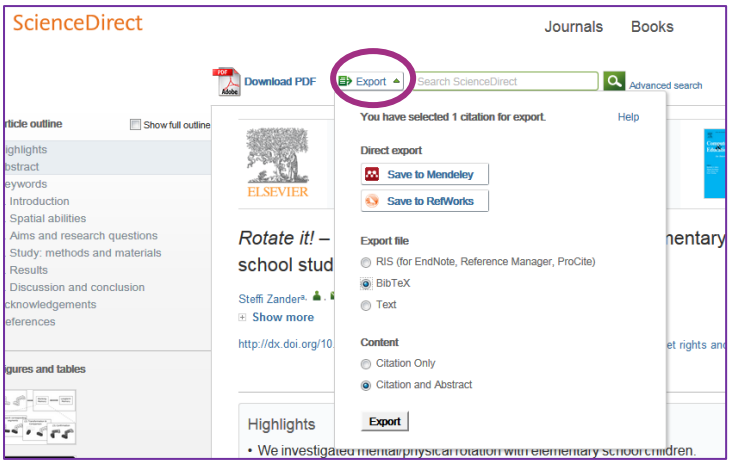

**Example 2. Exporting from Google Scholar.**

To export a BibTeX file in Google Scholar, click **Cite** under the relevant result. Then select **BibTeX.** The BibTeX information will be displayed in the browser; copy and paste it into your .bib file or into JabRef (instructions for JabRef on page 4) and save.

**Example 3. Exporting from a journal article webpage.**

You can also export BibTeX records from major journal webpages.



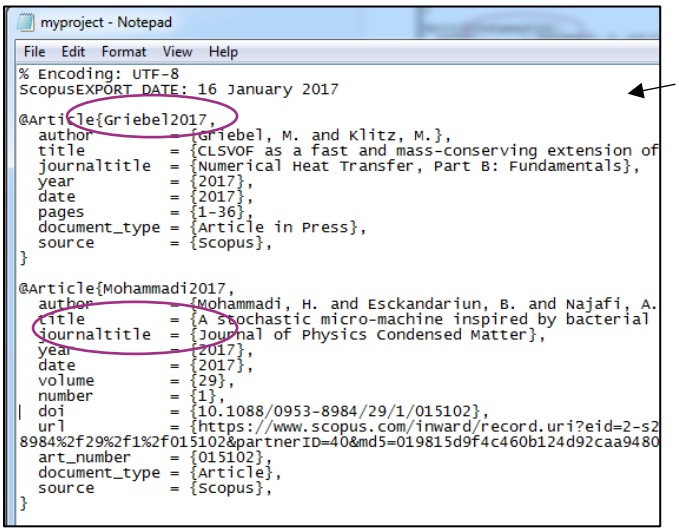

## How do I open and save my BibTeX file?

Depending on the database you will have various options for how to save and open your BibTeX file. Some databases will bring up a pop-up box, where you should open and save the file in your desired program, e.g. Notepad, another .txt editor or software such as JabRef (see page 4). Others will open the .bib file in another browser window. In this case you can copy and paste the .bib file into Notepad or your chosen .txt editor. Then give your .bib file the **same name as your .tex file** (your LaTeX document) and save it in the same folder on your PC. **Don't forget to add .bib to your filename**.

If you have LaTeX special characters (e.g. $, %, &) in your BibTeX file, this can create problems. 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 \$

## How do I use my BibTeX files with LaTeX?

To cite a source in LaTeX, you need to use the `\cite{…}` command. To cite a reference that you have saved as a BibTeX file, in the curly brackets you type the **unique citation key** that is included in the .bib file. The citation key will be automatically generated in your BibTex file if you've exported your reference from a database and is often (but not always) the author name and date. You will need to check them for consistency. You can edit the unique citation key if you wish.




This is an example of two records that have been exported from a database and stored as a BibTeX file in Notepad. To cite these in LaTeX, you would type the following:

```
\cite{Griebel2017}

\cite{Mohammadi2017}
```

Your .bib file will sometimes include unnecessary information in a 'notes' field which may pull through to the reference list in LaTeX. You can delete this in the .bib file and save the edit.

## How do I create my reference list in LaTeX?

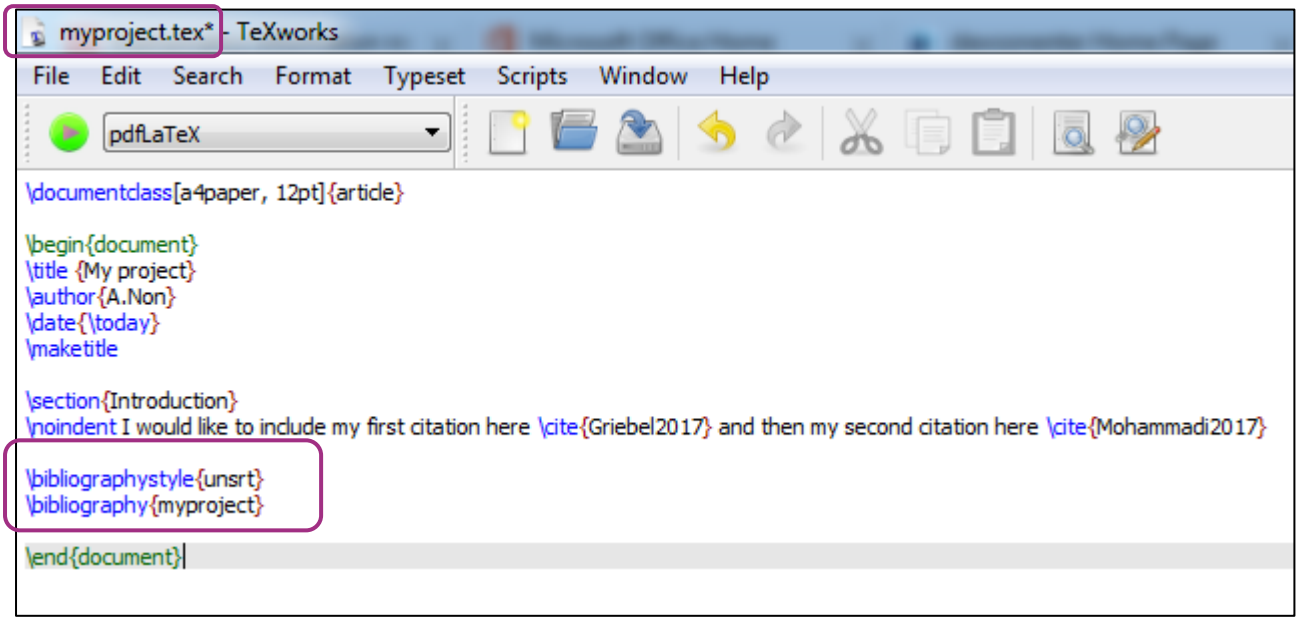
In your .tex document, indicate the referencing style you want to use by using the `\bibliographystyle` command followed by the style in curly brackets.

LaTeX comes with default referencing styles including:

- {plain} – a numbered style, but the numbers in the citations are generated based on the alphabetical order of the bibliography, not in the order of citation appearance in the text.
- {unsrt} – same as plain except the references in the bibliography appear in the order that the citations appear in the document
- {abbrv}
- {alpha}

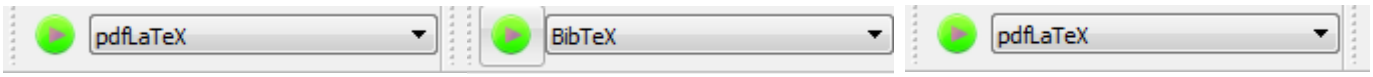
Journals often also provide style files of their referencing style/layout etc. to be used with LaTeX.

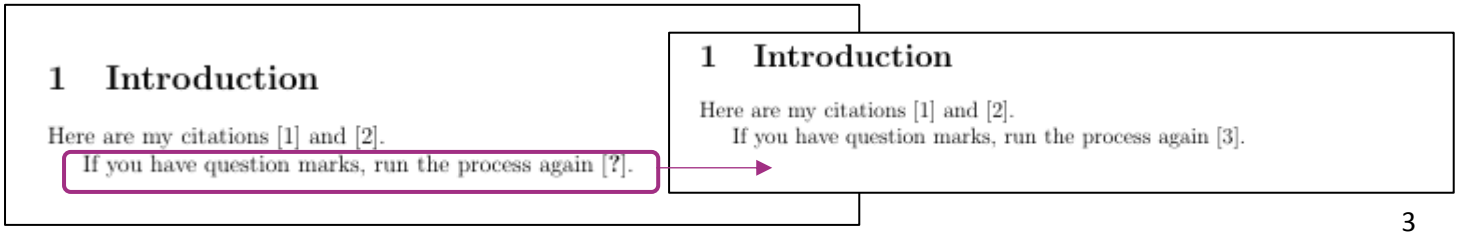
Then indicate where you would like your reference list to appear by using the `\bibliography` command followed by the file name of your .bib file in curly brackets (which should be the same as your .tex document, e.g. `\bibliography{myproject}`




## How do I generate my citations and bibliography in PDF format?

You will need to run LaTeX and BibTeX to make sure the bibliography is laid out correctly and the citations are correct. Run **pdfLaTeX,** then **BibTeX, then pdfLaTeX** (you will sometimes need run the last step twice).



# Part B: Managing your BibTeX files: using JabRef.

## What is JabRef?

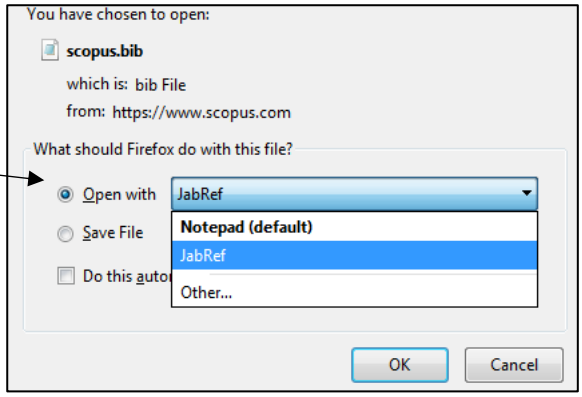
JabRef is an open source bibliography reference manager that uses BibTeX and BibLaTeX as its native file formats. JabRef organises your BibTeX files so they can be easily created and manipulated.

You can download JabRef at https://www.fosshub.com/JabRef.html.

To start a new BibTeX database in JabRef go to **File > New BibTeX database.**

## How do I export BibTeX files from databases to JabRef?

If you are using Firefox as your browser, some databases such as Scopus will give you the option to open the file with JabRef.



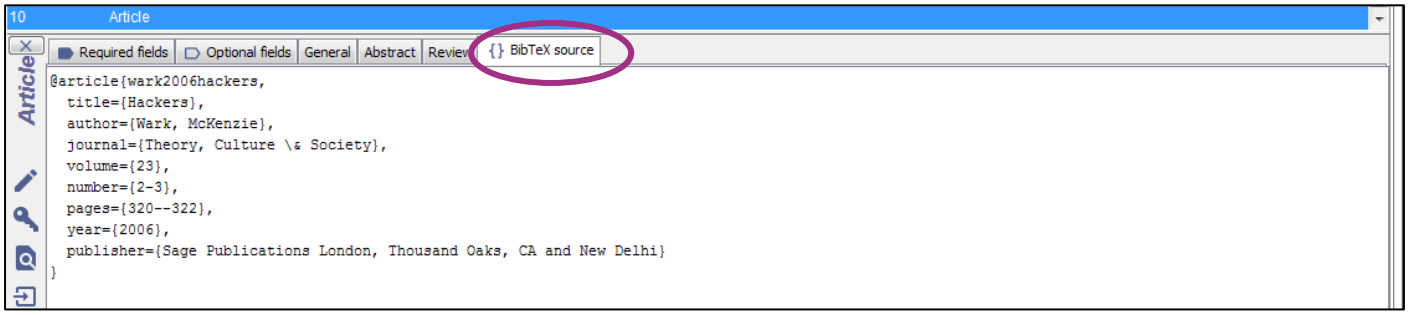

If you are using another browser or a database that does not allow this e.g. Google Scholar, you will either need to copy and paste the .bib file into JabRef manually, or save the .bib file in Notepad/a .txt editor and import it into JabRef. Both options are described below.

## How do I manually create BibTeX records in JabRef, e.g. when using Google Scholar?

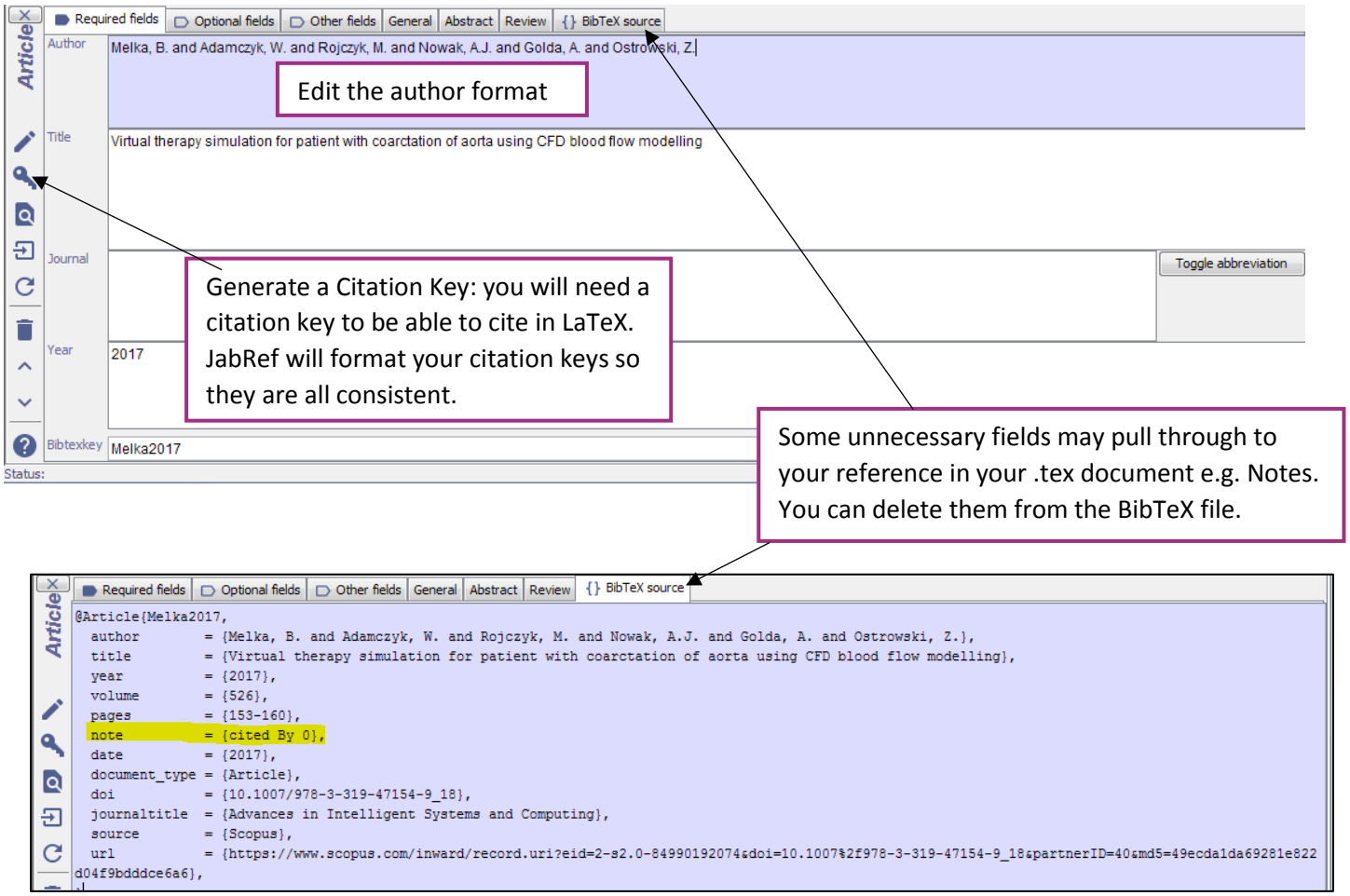
You may need to create a BibTeX file in JabRef e.g. if your resource doesn't have an export function, or you need to paste the .bib file generated from GoogleScholar.

1) In the database where you want to store your record, click the 'New BibTeX entry' icon and select the appropriate entry type.

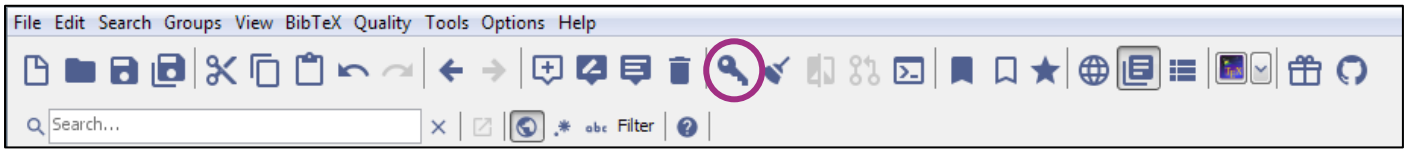

A new entry will appear in the database. Complete the necessary fields in the BibTeX editor window. The details for your .bib file will automatically generate in the **{ }BibTex source** tab. If you already have the details for your .bib file e.g. from Google Scholar, paste them into this tab and save . The entry will then appear in the database.



You can also use the BibTeX editor to tidy up existing entries imported from databases.




**Tip:** You can generate a citation key for multiple entries at once. Select the entries (use the CNTRL key) and click on the key in the taskbar. Generating consistent citation keys using JabRef will make it easier for you to cite in your .tex document.




**Tip:** if your JabRef references aren't displaying correctly in LaTeX, scan the entry for % signs, JabRef can have trouble with these and you may need to remove them from the .bib file. Also check your .bib entry to make sure there are commas after each line and all the fields are formatted correctly and consistently e.g. author names.

## Manually importing into JabRef.

If you have .bib files saved on your computer e.g. in Notepad that you want to import into JabRef, the *import* function in JabRef allows you to do this quickly and easily. Go to **File > Import into current database**, (or *into a new database* if you want to store the file in a separate database to your other files). The .bib file will be added to your database. You can also use this function if you wish to add a reference from other reference management software e.g. EndNote. If you are a user of the Zotero reference management software, you can also a use the JabFox browser add-on in Firefox.

## How do I save my JabRef database?

Click **File, Save database as**… to save your database. Make sure you give it the same name as your .tex document and save it in the same folder.

You can save multiple databases in JabRef. You can also copy and paste entries between databases. If you have a large number of references you may want to use the Groups function to manage them effectively.

## How do I use JabRef with LaTeX?

See page 3 for how to use your JabRef .bib files with LaTeX – the process is the same as with using Notepad or another .txt editor. Use the `\bibliography` command and include the name of your JabRef database in the curly brackets.