Session – 24 : Inserting bibliographic details in a LaTeX file
17-10-2019, 09:00 – 10:00 Hrs, RJN 302

[1] The bibliography

In scientific community we are expected to list all the sources of information we used while prepareing a document. The sources shall be verifiable and of archival nature. Usually journal articles, books, technical reports, standards and conference proceedings qualify as valid references. Avoid using websites as references and if you must, then give the URL and the date when accessed. To learn more about literature survey, look at the NPTEL video on Literature Survey. These are listed under the menu "Online Vidoes" in my personal home page at https://mme.iitm.ac.in/gphani/

[2] Sources of scientific information

Following websites will help you locate scientific information that is worthwhile. You should contact your research advisor / faculty member to know where to look for information that is relevant for your domain of research. This depends strongly on the topic and estabished researchers know these as part of their work.

1. https://www.sciencedirect.com/
2. https://www.springer.com/
3. https://www.aps.org/

From time to time, the central library of IIT Madras updates the list of journals it subscribes for its users. Such sites are there for every major university.

http://www.cenlib.iitm.ac.in/e-journals

[3] The DOI link

Since the last 2 decades, literature is being made available online. There is now a unique digital object identifier (DOI) tag for every document that is hosted on the internet. You can use it to locate the actual document even though the ownership of the source changes. The website dx.doi.org helps redirect a DOI link to the actual location.

[4] Bibliographic fields and the BibTeX format

One is expected to provide certain fields for every bibliographic item – including some fields for redundancy – so that the actual document can be traced back even if there were to be typographical errors in the listing.

For an article, one should report the title, authors, journal, volume, page numbers and the year. Additionally if you specify the DOI link, its great.

For a book, one should report the title, authors or editors, the edition number, publisher, location and year. Additionally if you specify the ISBN then its useful.

These details need to be entered in the BibTeX format in a ".bib" file for the program bibtex to read and compare with the latex document and help with listing of citations.

You do not have to enter these details manually. When you search for articles, you can export the citation in BibTeX format and copy-paste the details into the ".bib" file. Multiple bibliographic items can be appended one below other in a bib file. Sequence does not matter. Each bibliographic item has a unique key that is used to refer to that item in the latex document. You can edit the key in you ".bib" file as you like. Make sure the keys are unique within your ".bib" file.

[5] Sample BibTeX file.

Here is a sample bib file that we generated using copy-paste in the class.

```
@article{arie,
title = "Experimental characterization of heat transfer in an additively
manufactured polymer heat exchanger",
journal = "Applied Thermal Engineering",
volume = "113",
pages = "575 - 584",
year = "2017",
issn = "1359-4311",
doi = "https://doi.org/10.1016/j.applthermaleng.2016.11.030",
url = "http://www.sciencedirect.com/science/article/pii/S1359431116330630",
author = "Martinus A. Arie and Amir H. Shooshtari and Ratnesh Tiwari and
Serguei V. Dessiatoun and Michael M. Ohadi and Joshua M. Pearce"
}

@article{erian,
  title={Maternal, placental blood flow: a model with velocity-dependent
permeability},
  author={Erian, FF and Corrsin, S and Davis, SH},
  journal={Journal of biomechanics},
  volume={10},
  number={11-12},
  pages={807--814},
  year={1977},
  publisher={Elsevier}
}
```

[6] Running the BibTeX along with LaTeX

One you have informed latex about your bibliographic source file and the style in which the citations should be printed, you can run bibtex to get the references formatted. A sample tex file is given below along with the sequence of commands that is to be run.

In this example, we assume that the references are stored in a file "refs.bib".

```
\documentclass[12pt,a4paper]{article}
\usepackage[left=2cm,right=2cm,top=2cm,bottom=2cm]{geometry}
\author{Gandham Phanikumar}
\title{My Third LaTeX document with citations}
```

```
%------------------------------------

\begin{document}

\date{October 17, 2019}
\maketitle

\section{Introduction}

In this document we refer to two articles.

The first is an article by Erian et al~\cite{erian}.

\section{Discussion}

The second is an article by Arie et al.~\cite{arie}.

\bibliography{refs}
\bibliographystyle{alpha}

\end{document}
```

[8] Sequence of running the commands

If your latex file is called myfirst.tex and the references are stored in refs.bib then you need to run the following sequence of commands. Remove the ".aux" files if you see errors that you should not be getting and redo the compilation.

```
latex myfirst.tex
bibtex myfirst
latex myfirst.tex
dvipdf myfirst.dvi
```

The output of the above LaTeX file is in the following pages.

My Third LaTeX document with citations

Gandham Phanikumar

October 17, 2019

1 Introduction

In this document we refer to two articles.

The first is an article by Erian et al [ECD77].

2 Discussion

The second is an article by Arie et al. [AST+17].

References

[AST+17] Martinus A. Arie, Amir H. Shooshtari, Ratnesh Tiwari, Serguei V. Dessiatoun, Michael M. Ohadi, and Joshua M. Pearce. Experimental characterization of heat transfer in an additively manufactured polymer heat exchanger. *Applied Thermal Engineering*, 113:575 – 584, 2017.

[ECD77] FF Erian, S Corrsin, and SH Davis. Maternal, placental blood flow: a model with velocity-dependent permeability. *Journal of biomechanics*, 10(11-12):807–814, 1977.