

Introduction to L^AT_EX

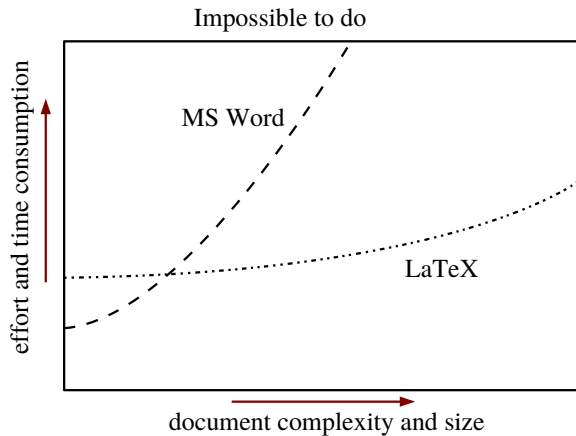
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Based on Pr Sylvain Laizet notes
Méthodes expérimentales avancées
M2 TMA

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Why $\text{\LaTeX}$?



Content

- ✓ What is $\text{\LaTeX}$?
- ✓ Your first document
- ✓ Things you need to know
- ✓ Typesetting Text
- ✓ Typesetting Mathematical Formulae
- ✓ Figures
- ✓ Bibliography

What is $\text{\LaTeX}$?

Definition from <http://www.latex-project.org/>: $\text{\LaTeX}$ is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. $\text{\LaTeX}$ is the de facto standard for the communication and publication of scientific documents. $\text{\LaTeX}$ is available as free software.

Definition from Wikipedia: $\text{\LaTeX}$ is a document preparation system and document markup language. $\text{\LaTeX}$ uses the $\text{\TeX}$ typesetting program for formatting its output, and is itself written in the $\text{\TeX}$ macro language.

$\text{\LaTeX}$ is not the name of a particular editing program, but refers to the encoding or tagging conventions that are used in $\text{\LaTeX}$ documents.

Almost any editing program or word-processor may be used to write $\text{\LaTeX}$ documents, although there are many editing programs written specially to make using $\text{\LaTeX}$ easy. One of the hallmarks of $\text{\LaTeX}$ as a piece of software and a document preparation system is its maturity. It has been used intensively as a writing environment of first choice by a large and diverse community of writers for many decades. As such, it has evolved into an extremely effective and powerful writing tool.

What is $\text{\LaTeX}$?

- Typesetting system for producing scientific and mathematical documents of high quality
- Build to make things look nice, readable and beautiful
- Suitable from simple letters to books
- Windows, Linux and Mac friendly
- Free to use
- $\text{\TeX}$ was created in 1977 by Donald Knuth, $\text{\LaTeX}$ was created by Leslie Lamport in 1994

What to read?

- Jon Warbrick's [Essential LaTeX](#) is a useful introduction,
- Quick introduction to mathematics with $\text{\LaTeX}$: [Essential Mathematical LaTeX](#),
- [The Not so Short Introduction to LaTeX2e](#) by Tobias Oetiker *et al.*,
- [An introduction to TeX and friends](#) by Gavin Maltby,
- LATEX: a Document Preparation System : User's Guide and Reference Manual by Leslie Lamport,
- LaTeX Reference Manual by Herbert Voss,
- Google is going to be your best friend!

Install L^AT_EX

- Online: <https://www.overleaf.com>
- Linux/Ubuntu
 - `sudo apt-get install texlive` or `sudo apt-get install texlive-full` + your favorite text editor (vi, gedit xemacs, etc.)
 - `sudo apt-get install texmaker`
- Mac
 - MacTeX <http://www.tug.org/mactex/>
 - TeXShop <http://pages.uoregon.edu/koch/texshop/>
 - TexMaker <http://www.xm1math.net/texmaker/>
- Windows
 - MikTeX <http://miktex.org/>
 - TeXnicCenter <http://www.texniccenter.org/>
 - TexMaker <http://www.xm1math.net/texmaker/>

Your first document

- ✓ Install $\text{\LaTeX}$
- ✓ Write your document
- ✓ Compile your document
- ✓ Check for potential errors
- ✓ Visualize your document

Write your document

```
\documentclass{article}
\begin{document}
Welcome to the world!
This is my first document using \LaTeX.
\end{document}
```

Things you might want to know

- $\text{\LaTeX}$ Input files

- 1- Whitespace characters (space or tab) are treated as only one space.
- 2- 1 empty line = end of paragraph
- 3- Several lines = 1 empty line
- 4- Special Characters `#` `$` `%` `^` `&` `_` `{` `}` `~` are
`\#` `\$` `\%` `\^{}` `\&` `\_` `\{` `\}` `\~{}`
- 5- `\\` = line breaking
- 6- $\text{\LaTeX}$ commands start with a backslash. Name with letters only.
Parameter between curly braces. Option between square brackets.
`\command[option]{parameter}`
My name is `\bf{Martin}` $\longrightarrow$ My name is **Martin**
- 7- Comments start with `%`

Things you might want to know

- Input file structure

- 1- Every input file must start with `\documentclass[]{\dots}`
- 2- To load a package `\usepackage[]{\dots}`
- 3- Body of the text between `\begin{document}` and `\end{document}`

- Layout of the document

- 1-`\documentclass[]{\dots}` $\longrightarrow$ article, report, book, slides
main options are 10pt, 11pt, 12pt, a4paper, letterpaper, onecolumn, twocolumn, twoside, oneside, landscape
`\documentclass[11pt,twoside,a4paper]{article}`
- 2-Packages: not everything in basic $\text{\LaTeX}$ $\longrightarrow$ `\usepackage[]{\dots}`
graphicx (figures), color (colors), amsmath/amsfonts (math formulas),
fancyhdr (customize headers and footers), hyperref (web links)
Feel free to build your own packages!

Things you might want to know

- Types of file

- 1- .tex: the $\text{\LaTeX}$ file where you write your text.
- 2- .sty: file related to a given package.
- 3- .dvi: Device Independent File. Result of the compilation. Can be visualized with xdvi or use for dvips.
- 4- .aux: File that transports information from one compilation to another.
- 5- .log: List of what happened during the last compilation.

Typesetting Text

- `\\` or `\newline` = line breaking and `\newpage` = page breaking
- $\text{\LaTeX}$ hyphenates words whenever necessary but if you are not happy
`\-`
- Ready-Made Strings `\today` `\LaTeX`
- Be careful with quotation marks, check for differences between “ and ”
- Special Characters
It's `-$-30\,,^{\circ}\mathrm{C}$`. I am very cold.
→ It's `-$-30^{\circ}\mathrm{C}`. I am very cold.
- Nice workpage for symbol is `textcomp`
`\textdagger` `\textcopyright` `\texteuro` `\textyen` † © € ¥

Typesetting Text

- Check the difference between `...` and `\ldots`
→ The result is ... and ...
- Accents: `C'est l'\''et\''e \\'a Paris, un h\^otel, stra\ss e`
→ C'est l'été à Paris, un hôtel, straÙe
- International Language: `\usepackage[language]{babel}` for specific typo rules

Typesetting Text

- Titles, Chapters, and Sections

- `\section{...}` `\subsection{...}` `\subsubsection{...}`
`\paragraph{...}` `\subparagraph{...}`
- For Report or book you also have `\chapter`
- Table of contents $\longrightarrow$ `\tableofcontents`
- The title of the whole document is generated by `\maketitle`
- But before you need `\title{...}` `\author{...}`

- Cross References

- `\label{marker}` `\ref{marker}` `\pageref{marker}`
- A reference to this subsection `\label{sec:this}`
looks like:
see section~`\ref{sec:this}`.
A reference to this subsection looks like: see section 15

Typesetting Text

- Footnotes

- `\footnote{this is a footnote}`¹

- Style, Font

- I want to put this word in *italic* and I want this EQUATION in **bold**
`\underline{want}` `{\it italic}` `{\scshape equation}`
`{\bf bold}`

- Environments `\begin{environment}` `\end{environment}`

- itemize for simple lists (can of course be customized!) or enumerate
`\begin{itemize}`
`\item first point`
`\item second point`
`\item third point`
`\item fourth point`
`\end{itemize}`

¹this is a footnote

Typesetting Text

- Flushleft, Flushright, and Center

To generate paragraphs that are either left, right aligned or centred.

- Quote, Quotation, and Verse

Useful to highlight a small quote (quote) or a long quote (quotation) or for a poem (verse, line separated with \\

- Abstract, for scientific publications mainly

- Tabular, for beautiful, easily customized tables

```
\begin{tabular}{|r|l|}
```

```
\hline
```

```
7C0 & hexadecimal \\
```

```
$\pi^2$ & octal \\ \cline{2-2}
```

```
3.14 & binary \\
```

```
\hline \hline
```

```
1977 & decimal \\
```

```
\hline
```

```
\end{tabular}
```

7C0	hexadecimal
π^2	octal
3.14	binary
1977	decimal

Typesetting Text

- Floating Bodies

- For figures and tables

`\begin{figure}[placement specifier]` or `\begin{table}[...]`
[hbt] place the object here (h), or bottom of page (b) or top of page (t)

$\text{\LaTeX}$ will do the job for you, so you may not be happy about that!

- Caption/Ref/Label

Use `\caption{bla bla bla}` for a description of your object,
`\label{labelname}` to give a reference number and
`\ref{labelname}` to cite your object in the text.

Typesetting Mathematical Formulae

- Single equations

- In the text $\rightarrow$ `$...$`

the equation is `$x^2+y^2=\sqrt{2}$` $\rightarrow$ the equation is $x^2 + y^2 = \sqrt{2}$

- Equation mode $\rightarrow$ `\begin{equation} ... \end{equation}`
This is text style:

`$\lim_{n \rightarrow \infty} \sum_{k=1}^n \frac{1}{k^2}`
`= \frac{\pi^2}{6}$`.

And this is display style:

`\begin{equation}`
`\lim_{n \rightarrow \infty}`
`\sum_{k=1}^n \frac{1}{k^2}`
`= \frac{\pi^2}{6}`
`\end{equation}`

- equation with no number $\rightarrow$

`\begin{equation*} ... \end{equation*}`

This is text style:

$\lim_{n \rightarrow \infty} \sum_{k=1}^n \frac{1}{k^2} = \frac{\pi^2}{6}$. And
this is display style:

$$\lim_{n \rightarrow \infty} \sum_{k=1}^n \frac{1}{k^2} = \frac{\pi^2}{6} \quad (1)$$

Typesetting Mathematical Formulae

- Multiple equations

- For long equations $\rightarrow$ `\begin{eqnarray} ... \end{eqnarray}`

```
\begin{equation}
```

```
a = b + c + d + e + f
```

```
+ g + h + i + j
```

```
+ k + l + m + n + o + p
```

```
\label{eq:equation_too_long}
```

```
\end{equation}
```

```
\begin{eqnarray}
```

```
a & = & b + c \nonumber \\
```

```
& = & d + e + f + g + h + i
```

```
+ j + k + l \nonumber \\
```

```
&& +\: m + n + o \nonumber \\
```

```
& = & p + q + r + s \nonumber
```

```
\end{eqnarray}
```

$$a = b + c + d + e + f + g + h + i + j + k + l + \dots \quad (2)$$

$$\begin{aligned} a &= b + c \\ &= d + e + f + g + h \\ &\quad + i + j + k + l \\ &\quad + m + n + o \\ &= p + q + r + s \end{aligned}$$

Typesetting Mathematical Formulae

- Arrays and Matrices

- array environment and `\\` to break lines

```
\begin{equation*}
\mathbf{X} = \left(
\begin{array}{ccc}
x_1 & x_2 & \ldots \\
x_3 & x_4 & \ldots \\
\vdots & \vdots & \ddots
\end{array}
\right)
\end{equation*}
```

$$\mathbf{X} = \begin{pmatrix} x_1 & x_2 & \dots \\ x_3 & x_4 & \dots \\ \vdots & \vdots & \ddots \end{pmatrix}$$

- To be noted here: `\mathbf{X}` and `\left(` and `\right)`

Typesetting Mathematical Formulae

- There is always many options!

```
\begin{equation*}
```

```
|x| = \left\{
```

```
\begin{array}{rl}
```

```
-x & \text{if } x < 0, \\
```

```
0 & \text{if } x = 0, \\
```

```
x & \text{if } x > 0.
```

```
\end{array} \right.
```

```
\end{equation*}
```

```
\begin{equation*}
```

```
|x| =
```

```
\begin{cases}
```

```
-x & \text{if } x < 0, \\
```

```
0 & \text{if } x = 0, \\
```

```
x & \text{if } x > 0.
```

```
\end{cases}
```

```
\end{equation*}
```

$$|x| = \begin{cases} -x & \text{if } x < 0, \\ 0 & \text{if } x = 0, \\ x & \text{if } x > 0. \end{cases}$$

$$|x| = \begin{cases} -x & \text{if } x < 0, \\ 0 & \text{if } x = 0, \\ x & \text{if } x > 0. \end{cases}$$

Typesetting Mathematical Formulae

- Matrices can also be typeset with the `matrix` environment

```
\begin{equation*}
```

```
\begin{matrix}
```

```
1 & 2 \\\
```

```
3 & 4
```

```
\end{matrix} \quad
```

```
\begin{bmatrix}
```

```
p_{11} & p_{12} &
```

```
& p_{1n} \\\
```

```
p_{21} & p_{22} &
```

```
& p_{2n} \\\
```

```
\vdots & \vdots &
```

```
& \vdots \\\
```

```
p_{m1} & p_{m2} &
```

```
& p_{mn}
```

```
\end{bmatrix}
```

```
\end{equation*}
```

1 2
3 4

$$\begin{bmatrix} p_{11} & p_{12} & p_{1n} \\ p_{21} & p_{22} & p_{2n} \\ \vdots & \vdots & \vdots \\ p_{m1} & p_{m2} & p_{mn} \end{bmatrix}$$

Typesetting Mathematical Formulae

- Spacing in Math mode

```
\begin{equation*}
\int_1^2 \ln x \, \mathrm{d}x
\qquad
\int_1^2 \ln x \, \mathrm{d}x
\end{equation*}
```

$$\int_1^2 \ln x \, dx$$

$$\int_1^2 \ln x \, dx$$

```
\begin{equation*}
{}^{14}_6\text{C}
\qquad
\text{versus}
\qquad
{}^{14}_6\text{C}
\end{equation*}
```



versus



Typesetting Mathematical Formulae

```
\begin{equation*}
P = \frac{\displaystyle{
\sum_{i=1}^n (x_i - x)
(y_i - y)}}{\displaystyle{\left[
\sum_{i=1}^n (x_i - x)^2
\sum_{i=1}^n (y_i - y)^2
\right]^{1/2}}}
\end{equation*}
```

$$P = \frac{\sum_{i=1}^n (x_i - x)(y_i - y)}{\left[\sum_{i=1}^n (x_i - x)^2 \sum_{i=1}^n (y_i - y)^2 \right]^{1/2}}$$

List of Mathematical symbols

- Be sure to use the packages `amsmath`, `amssymb` and `latexsym`
- The list is not complete, use google to find the symbol you are looking for

$\hat{a}$	<code>\hat{a}</code>	$\check{a}$	<code>\check{a}</code>	$\tilde{a}$	<code>\tilde{a}</code>
$\grave{a}$	<code>\grave{a}</code>	$\dot{a}$	<code>\dot{a}</code>	$\ddot{a}$	<code>\ddot{a}</code>
$\bar{a}$	<code>\bar{a}</code>	$\vec{a}$	<code>\vec{a}</code>	$\widehat{AAA}$	<code>\widehat{AAA}</code>
$\acute{a}$	<code>\acute{a}</code>	$\breve{a}$	<code>\breve{a}</code>	$\widetilde{AAA}$	<code>\widetilde{AAA}</code>
$\mathring{a}$	<code>\mathring{a}</code>				

α	<code>\alpha</code>	θ	<code>\theta</code>	o	<code>o</code>	v	<code>\upsilon</code>
β	<code>\beta</code>	ϑ	<code>\vartheta</code>	π	<code>\pi</code>	ϕ	<code>\phi</code>
γ	<code>\gamma</code>	ι	<code>\iota</code>	ϖ	<code>\varpi</code>	φ	<code>\varphi</code>
δ	<code>\delta</code>	κ	<code>\kappa</code>	ρ	<code>\rho</code>	χ	<code>\chi</code>
ϵ	<code>\epsilon</code>	λ	<code>\lambda</code>	ϱ	<code>\varrho</code>	ψ	<code>\psi</code>
ε	<code>\varepsilon</code>	μ	<code>\mu</code>	σ	<code>\sigma</code>	ω	<code>\omega</code>
ζ	<code>\zeta</code>	ν	<code>\nu</code>	ς	<code>\varsigma</code>		
η	<code>\eta</code>	ξ	<code>\xi</code>	τ	<code>\tau</code>		
Γ	<code>\Gamma</code>	Λ	<code>\Lambda</code>	Σ	<code>\Sigma</code>	Ψ	<code>\Psi</code>
Δ	<code>\Delta</code>	Ξ	<code>\Xi</code>	Υ	<code>\Upsilon</code>	Ω	<code>\Omega</code>
Θ	<code>\Theta</code>	Π	<code>\Pi</code>	Φ	<code>\Phi</code>		

List of Mathematical symbols

$\leq$	<code><</code>	$\geq$	<code>></code>	$=$	<code>=</code>
$\leq$	<code>\leq</code> or <code>\le</code>	$\geq$	<code>\geq</code> or <code>\ge</code>	$\equiv$	<code>\equiv</code>
$\ll$	<code>\ll</code>	$\gg$	<code>\gg</code>	$\dot{=}$	<code>\doteq</code>
$\prec$	<code>\prec</code>	$\succ$	<code>\succ</code>	$\sim$	<code>\sim</code>
$\preceq$	<code>\preceq</code>	$\succeq$	<code>\succeq</code>	$\simeq$	<code>\simeq</code>
$\subset$	<code>\subset</code>	$\supset$	<code>\supset</code>	$\approx$	<code>\approx</code>
$\subseteq$	<code>\subseteq</code>	$\supseteq$	<code>\supseteq</code>	$\cong$	<code>\cong</code>
$\sqsubset^a$	<code>\sqsubset^a</code>	$\sqsupset^a$	<code>\sqsupset^a</code>	$\Join^a$	<code>\Join^a</code>
$\sqsubseteq$	<code>\sqsubseteq</code>	$\sqsupseteq$	<code>\sqsupseteq</code>	$\bowtie$	<code>\bowtie</code>
$\in$	<code>\in</code>	$\ni$, $\owns$	<code>\ni</code> , <code>\owns</code>	$\propto$	<code>\propto</code>
$\vdash$	<code>\vdash</code>	$\dashv$	<code>\dashv</code>	$\models$	<code>\models</code>
$\mid$	<code>\mid</code>	$\parallel$	<code>\parallel</code>	$\perp$	<code>\perp</code>
$\smile$	<code>\smile</code>	$\frown$	<code>\frown</code>	$\asymp$	<code>\asymp</code>
$:$	<code>:</code>	$\notin$	<code>\notin</code>	$\neq$ or $\ne$	<code>\neq</code> or <code>\ne</code>

$\sum$	<code>\sum</code>	$\bigcup$	<code>\bigcup</code>	$\bigvee$	<code>\bigvee</code>
$\prod$	<code>\prod</code>	$\bigcap$	<code>\bigcap</code>	$\bigwedge$	<code>\bigwedge</code>
$\coprod$	<code>\coprod</code>	$\bigsqcup$	<code>\bigsqcup</code>	$\biguplus$	<code>\biguplus</code>
$\int$	<code>\int</code>	$\oint$	<code>\oint</code>	$\bigodot$	<code>\bigodot</code>
$\bigoplus$	<code>\bigoplus</code>	$\bigotimes$	<code>\bigotimes</code>		

List of Mathematical symbols

$+$	<code>+</code>	$-$	<code>-</code>		
$\pm$	<code>\pm</code>	$\mp$	<code>\mp</code>	$\triangleleft$	<code>\triangleleft</code>
$\cdot$	<code>\cdot</code>	$\div$	<code>\div</code>	$\triangleright$	<code>\triangleright</code>
$\times$	<code>\times</code>	$\setminus$	<code>\setminus</code>	$\star$	<code>\star</code>
$\cup$	<code>\cup</code>	$\cap$	<code>\cap</code>	$\ast$	<code>\ast</code>
$\sqcup$	<code>\sqcup</code>	$\sqcap$	<code>\sqcap</code>	$\circ$	<code>\circ</code>
$\vee$	<code>\vee</code> , <code>\lor</code>	$\wedge$	<code>\wedge</code> , <code>\land</code>	$\bullet$	<code>\bullet</code>
$\oplus$	<code>\oplus</code>	$\ominus$	<code>\ominus</code>	$\diamond$	<code>\diamond</code>
$\odot$	<code>\odot</code>	$\oslash$	<code>\oslash</code>	$\uplus$	<code>\uplus</code>
$\otimes$	<code>\otimes</code>	$\bigcirc$	<code>\bigcirc</code>	$\amalg$	<code>\amalg</code>
$\triangleup$	<code>\triangleup</code>	∇	<code>\nabla</code>	$\dagger$	<code>\dagger</code>
$\lhd$	<code>\lhd</code> ^a	$\rhd$	<code>\rhd</code> ^a	$\ddagger$	<code>\ddagger</code>
$\unlhd$	<code>\unlhd</code> ^a	$\unrhd$	<code>\unrhd</code> ^a	$\wr$	<code>\wr</code>

List of Mathematical symbols

$\leftarrow$	<code>\leftarrow</code> or <code>\gets</code>	$\longleftarrow$	<code>\longleftarrow</code>
$\rightarrow$	<code>\rightarrow</code> or <code>\to</code>	$\longrightarrow$	<code>\longrightarrow</code>
$\leftrightarrow$	<code>\leftrightarrow</code>	$\longleftrightarrow$	<code>\longleftrightarrow</code>
$\Leftarrow$	<code>\Leftarrow</code>	$\Longleftarrow$	<code>\Longleftarrow</code>
$\Rightarrow$	<code>\Rightarrow</code>	$\Longrightarrow$	<code>\Longrightarrow</code>
$\Leftrightarrow$	<code>\Leftrightarrow</code>	$\Longleftrightarrow$	<code>\Longleftrightarrow</code>
$\mapsto$	<code>\mapsto</code>	$\longmapsto$	<code>\longmapsto</code>
$\hookleftarrow$	<code>\hookleftarrow</code>	$\hookrightarrow$	<code>\hookrightarrow</code>
$\leftharpoonup$	<code>\leftharpoonup</code>	$\rightharpoonup$	<code>\rightharpoonup</code>
$\leftharpoondown$	<code>\leftharpoondown</code>	$\rightharpoondown$	<code>\rightharpoondown</code>
$\rightleftharpoons$	<code>\rightleftharpoons</code>	$\iff$ (bigger spaces)	<code>\iff</code> (bigger spaces)
$\uparrow$	<code>\uparrow</code>	$\downarrow$	<code>\downarrow</code>
$\Uparrow$	<code>\updownarrow</code>	$\Uparrow$	<code>\Uparrow</code>
$\Downarrow$	<code>\Downarrow</code>	$\Updownarrow$	<code>\Updownarrow</code>
$\nearrow$	<code>\nearrow</code>	$\searrow$	<code>\searrow</code>
$\swarrow$	<code>\swarrow</code>	$\nwarrow$	<code>\nwarrow</code>
$\leadsto$	<code>\leadsto</code> ^a		

Figures

- Export your picture in PS or EPS format + package `graphicx`

```
\begin{figure}[htbp]
\centering
\includegraphics[trim = 0cm 0cm 0cm 0cm,width=4cm,clip]{avion.ps}
\caption{This is the caption of my figure}
\end{figure}
```



Figure: This is the caption of my figure

Figures

Main options for `\includegraphics[options]{file}`

- `width=xx`: Specify the preferred width of the imported image to `xx`.
- `height=xx`: Specify the preferred height of the imported image to `xx`.
- `keepaspectratio=`: This can be set to either `true` or `false`.
- `scale=xx`: Scales the image by the desired scale factor. e.g, 0.5 to reduce by half, or 2 to double
- `angle=xx`: This option can rotate the image by `xx` degrees (counter-clockwise)
- `trim=l b r t`: This option will crop the imported image by `l` from the left, `b` from the bottom, `r` from the right, and `t` from the top. Where `l`, `b`, `r` and `t` are lengths
- `clip=true`: For the `trim` option to work, you must set `clip=true`

Bibliography

- First option: use a database with bibtex

`\bibliographystyle{plain}` and `\bibliography{bibliofile}`

1-Generate a database in a XXX.bib file

2-latex yourlatexfile.tex ($\times 1$)

3-bibtex yourlatexfile ($\times 1$)

4-latex yourlatexfile.tex ($\times 2$)

```
@ARTICLE{lamballaisetal08,  
  author = {E. Lamballais and J. Silvestrini and S. Laizet},  
  year   = {2008},  
  title  = {Direct numerical simulation of a separation bubble  
           on a rounded finite-width leading edge},  
  journal = {Int. J. Heat and Fluid Flow},  
  number = {3},  
  volume = {{\rm 29}},  
  pages  = {612--625} }
```


Bibliography

```
@BOOK{lesieur08,  
  author   = {M. Lesieur},  
  year     = {2008},  
  title    = {Turbulence in fluids},  
  edition  = {fourth},  
  publisher = {Springer} }  
  
@INPROCEEDINGS{laizet&vassilicos08,  
  author    = {S. Laizet and J. C. Vassilicos},  
  year      = {2008},  
  title     = {Direct Numerical Simulation of  
              fractal-generated turbulence},  
  booktitle = {Proc. DLES-7},  
  address   = {Trieste},  
  date      = {September},}
```

Bibliography

- Second option: use the environment `thebibliography`

```
\begin{thebibliography}{10}  
\bibitem[1]{neu83}%1  
M. Neumann, {\em Parallel GRASP with path-relinking  
for job shop scheduling}, Mol. Phys. 50 (1983), pp. 841--843  
\bibitem[2]{ed84}%2  
D.M.F. Edwards and I.R. McDonald, {\em Positive bases  
in numerical optimization}, Comput. Optim. Appl. 21 (1984),  
pp. 169--175.  
\end{thebibliography}
```

- In both cases, use `\cite{reference}` in the tex file

References

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Conclusion

- Many things about $\text{\LaTeX}$ are not covered in this lecture (see list of websites/books)
- Be patient, be cool and take your time
- Use Google or your geeky friends when you are stuck
- Try it!