

Introduction to \LaTeX

A better way of typesetting documents

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Recurse Center

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What is \LaTeX ?

Why use it?

Pros and cons

Examples

\LaTeX basics

Resources

–Break–

Basic code examples

Using packages

Math in \LaTeX

Other useful features



- ▶ A system/markup language for typesetting documents
- ▶ Originally geared towards scientific/technical documents
- ▶ Free software
- ▶ Very customizable
- ▶ Part of the greater \TeX family (\TeX , XeLaTeX, LuaLaTeX...)





Pros

- ▶ The de facto standard for academic articles
- ▶ Many journals, conferences, etc. have style files
- ▶ Very easy to include formulas, symbols, etc.
- ▶ Version-control your documents!
- ▶ Pre-existing packages for pretty much anything;
If you really can't find one for feature X, write your own!
- ▶ Huge, active community of users

Cons:

- ▶ Learning curve; can be overwhelming at first
- ▶ The perfect document set-up can take a while
- ▶ You *will* get weird errors (see slide 6)





To see how a basic article works, take a look at
`example/simple-example.tex`!



Online collaborative editor: <https://www.sharelatex.com/>



Documentation/guides:

- ▶ Wikibooks manual:
<https://en.wikibooks.org/wiki/LaTeX>
- ▶ ShareLaTeX documentation:
<https://www.sharelatex.com/learn>

Getting help:

- ▶ $\text{T}_\text{E}\text{X}/\text{L}_\text{A}\text{T}_\text{E}\text{X}$ Stack Exchange:
<http://tex.stackexchange.com/>
- ▶ Google is your friend!
Someone else has definitely had problem X.



If you need to leave, now's a good time!
More details after the break.





In preamble: `\usepackage{packagename}`

- ▶ Page layout: `\usepackage[margin=1.5in]{geometry}`
- ▶ Include image files: `graphicx`
- ▶ Include web links: `hyperref`
- ▶ Display code: `verbatim` or `listings`
- ▶ Control line spacing more easily: `setspace`
- ▶ Customize headers/footers: `fancyhdr`
- ▶ Customize figure/table captions: `caption`
- ▶ More control over lists: `enumitem`



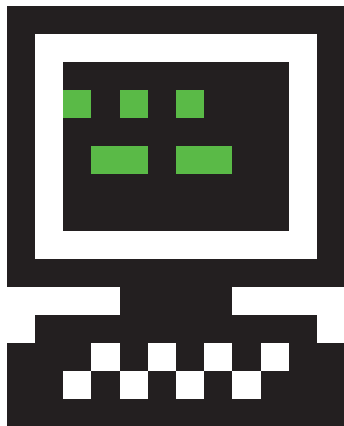


Figure 1: The RC logo



Table 1: Recusers

Name	Pseudonym	Batch
Veronica Hanus	Flight Witch	Fall 2
Anjana Vakil	Spandex Governor	Fall 2

Useful packages:

- ▶ Controlling table widths: `tabularx`
- ▶ Multi-row cells: `multirow`
- ▶ Better formatting: `booktabs`



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Pitfalls:

- ▶ Standard themes are uuuugly
- ▶ Setting up a template you like can be a headache
- ▶ Many academics who use \LaTeX for articles still use PowerPoint etc. for slides/posters



`.bib` files

List all your sources in bibtex format.

Many citation systems (e.g. Google scholar, Mendeley) offer an “export to bibtex” option.

`biblatex` Package

Allows you to fully customize citation and bibliography styles.