An Introduction to LaTeX and Beamer

SWIG

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Outline

. . . Not like the gloves

- $/'leit\epsilon x/$ . . . "Lay - tek", "Lah - tek" is also commonly spoken
- A high quality typesetting (*not a word processor*) language used by matematicains, scientists and scholars in academia and industry
- Generally regarded as the standard for writing academic papers

Advantages of LaTeX

- Graduate students are poor. LaTeXis free!
- Available on all Windows, Mac & Linux
- .tex files are ASCII files and very portable are portable, and the output is in PDF, DVI or PS.
  - Every computer can open a PDF, not so with Word or Powerpoint

Advantages continued...

- Typesetting is much better, more professional. This is especially true for mathematics. Can be formatted to suit various publication styles easily.
- Styles for different publication styles are easily available, as are Templates for letters, articles, books, reports etc. (*just ask Google!*)
- Bibliography management

Still more advantages

- Commands are easy to learn, though daunting at first
- Never crash!
- Can compile huge books... $\approx 70,000$ pages

Disadvantages of LaTeX

1. Font selection not as easy as Word.
2. Difficult to flow text around pictures/figures
3. If you write few documents, or only want short documents with little math
   a.) The first time you write in LaTeX, it will likely take longer than you would like...
4. Does not *directly* support drawing figures... you need other software

Disadvantages of LaTeX, continued

5. Spelling/Grammar not as convenient to check as in Word
6. Must remember commands
7. Not straightforward for creating complex tables

How do I get it?

- http://support.math.arizona.edu/tex/ for all your needs
- Good IDEs:
  1. Kile (*Linux*)
  2. TeXnicCenter (*Windows*)
  3. WinEdt (*Windows*, *clearly*)
  4. TeXShop (*Mac*)

Outline

A Skeleton file

```
% my first LaTeX file!
/ documentclass[12pt]{article}
        %preamble
        / usepackage{graphix, amsmath}
/ begin{document}
        / section{This is a section title}
        / subsection{This is a subsection title}
        / subsubsection{This is... you get the point}
                / par First Paragraph goes here.


                / par Second Paragraph is here, and has some math.
$/sqrt{/frac{/alpha}{/pi}}/leq /epsilon$
/end{document}
```

Real, live LaTeX

- For a comprehensive list of commands, go Google...