Who am I?

- David P. Larson
- PhD Candidate, MAE and CER
- Coimbra Research Group
- Affiliated with IDEA Student Center
- ENG 10 instructor: eng10.ucsd.edu

ieng6.ucsd.edu/~dplarson/
ENGINEERING GRADUATE & SCHOLARLY TALKS
FRIDAYS, NOON-1 PM

/Jan 12
INTRODUCTION TO LaTeX TECHNICAL WRITING
[FUNG AUDITORIUM, 1ST FLOOR, BIOENGINEERING BUILDING]
LUNCH SPONSORED BY DEPARTMENT OF STRUCTURAL ENGINEERING

/Jan 26
HABITS & STRATEGIES FOR INCREASING EUREKA MOMENTS IN RESEARCH
[QUALCOMM ROOM, 1ST FLOOR, JACOBS HALL]
LUNCH SPONSORED BY DEPARTMENT OF BIOENGINEERING

/Feb 09
DATA VISUALIZATION & FORMATTING FOR TECHNICAL DOCUMENTS & JOURNALS
[QUALCOMM ROOM, 1ST FLOOR, JACOBS HALL]
LUNCH SPONSORED BY DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
LaTeX = \textit{LAH-tek}
Why use LaTeX?

- Open-source/free
- The standard for writing technical documents
- Separates content from formatting
- Many useful features (e.g. auto re-numbering of citations, figures, etc.)
Setup

Open up a LaTeX editor:

- TeX Live (local install)
- ShareLaTeX (website)
- Overleaf (website) (what we’ll use today)
Workflow

1. Edit source file (.tex)

2. Typeset source file to produce .pdf

3. Repeat
Welcome to Overleaf, David Larson!

You can manage all your projects from this page.

CREATE A NEW PROJECT
\documentclass{article}

% Language and font encodings
\usepackage[english]{babel}
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}

% Sets page size and margins
\usepackage[a4paper,\top=3cm,\bottom=2cm,\left=3cm,\right=3cm,\marginparwidth=1.75cm]{geometry}

% Useful packages
\usepackage{amsmath}
\usepackage{graphicx}
\usepackage{colorinlistoftodos,todonotes}
\usepackage{colorlinks, allcolors=blue, hyperref}

\title{Your Paper}
\author{You}
\begin{document}
\maketitle
Your abstract.
\section{Introduction}
Your introduction goes here! Some examples of commonly used commands and features are listed below, to help you get started. If you have a question, please use the help menu ("?!") on the top bar to search for help or ask us a question.
\section{Some examples to get started}
\subsection{How to include Figures}
First you have to upload the image file from your computer using the upload link in the project menu. Then use the includegraphics command to include it in your document. Use the figure environment and the caption command to add a number and a caption to your figure. See the code for Figure 1 in this section for an example.
\subsection{How to add Comments}
Comments can be added to your project by clicking on the comment icon in the toolbar above. To reply to a comment, simply click the reply button in the lower right corner of the comment, and you can close them when you're done.
Comments can also be added to the margins of the compiled PDF using the todo command, as shown in the example on the right. You can also add inline comments.

% Usage of table and tabular commands for basic tables — see Table 1, for example.
\end{document}
\documentclass{article}
\title{Intro to LaTeX}
\author{Bob Smith}
\begin{document}
\maketitle
\section{Introduction}
Words go here!
\end{document}
\documentclass{article}
\title{Intro to LaTeX}
\author{Bob Smith}
\begin{document}
\maketitle
\section{Introduction}
Words go here!
\end{document}
\documentclass{article}
\title{Intro to LaTeX}
\author{Bob Smith}
\begin{document}
\maketitle
\section{Introduction}
Words go here!
\end{document}
Equations

\begin{equation}
 f(x) = ax + b
\end{equation}

$f(x) = ax + b$
Greek symbols

\begin{equation}
y = \alpha x + \beta
\end{equation}
\begin{equation}
  z(x, y) = \int x^2 \, dx + e^y
\end{equation}
Labels and cross-referencing

\begin{equation}
L(x, y) = \int_a^b f(x) \, dx
\end{equation}

\label{eq:integral}

\end{equation}

Equation \ref{eq:integral} shows...
...where $\gamma = 0.1$ and $x_0 = 57.3$.

We assume there exists a linear mapping $f : \mathbb{R}^n \mapsto \mathbb{R}$ such that...

...with $L(x, \lambda, \nu)$ defined as...
ENGINEERING GRADUATE & SCHOLARLY TALKS

FRIDAYS, NOON-1 PM

/Jan 12
INTRODUCTION TO LaTeX TECHNICAL WRITING
[FUNG AUDITORIUM, 1ST FLOOR, BIOENGINEERING BUILDING]
LUNCH SPONSORED BY DEPARTMENT OF STRUCTURAL ENGINEERING

/Jan 26
HABITS & STRATEGIES FOR INCREASING EUREKA MOMENTS IN RESEARCH
[QUALCOMM ROOM, 1ST FLOOR, JACOBS HALL]
LUNCH SPONSORED BY DEPARTMENT OF BIOENGINEERING

/Feb 09
DATA VISUALIZATION & FORMATTING FOR TECHNICAL DOCUMENTS & JOURNALS
[QUALCOMM ROOM, 1ST FLOOR, JACOBS HALL]
LUNCH SPONSORED BY DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
Questions?