LaTeX FOR LINGUISTS

Workshop at School of Humanities and Social Sciences, Nanyang Technological University

Lim Lian Tze (Ph.D.) liantze@gmail.com

19 March 2015

KDU College Penang, Malaysia

Agenda

Basics

Typesetting Text

Structuring and Cross-referencing Text

Citations and References

Typesetting Mathematics

Graphics, Figures and Tables

Multilingual Text

Linguistic Examples and Interlinear Glosses

Presentation Slides

BASICS

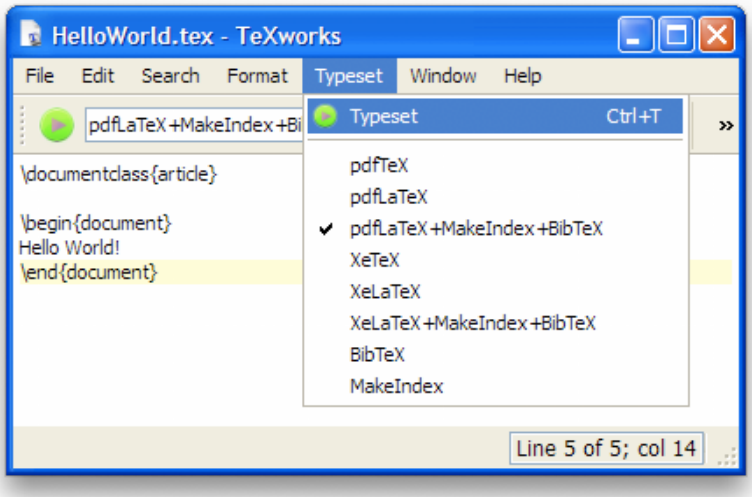
Minimal Document Structure

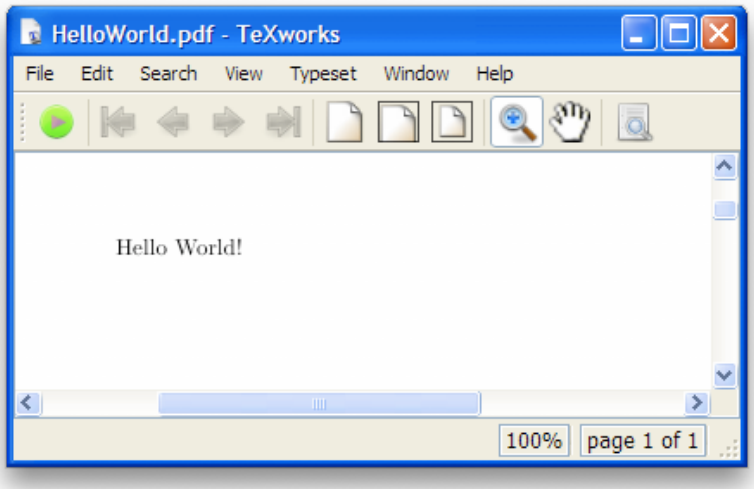
```
%% helloworld.tex - First LaTeX document
\documentclass{article}

\begin{document}
Hello World!
\end{document}
```

- Standard document classes:
  - `article`: for short reports, articles in proceedings or journals, etc.
  - `book`: for real books.
  - `report`, `letter`, ...
- Other document classes: `beamer`, `scrartcl`, `memoir`, `recipe`, `resume`, `leaflet`, `exam`, `beamerposter`...

LaTeX Workflow in TeXworks

1. Create, edit, save `.tex` file
2. Make sure Typeset operation set to pdfLaTeX+MakeIndex+BibTeX
3. Typeset (Ctrl + T or ▶)
4. Correct errors, repeat Typeset
5. View Output

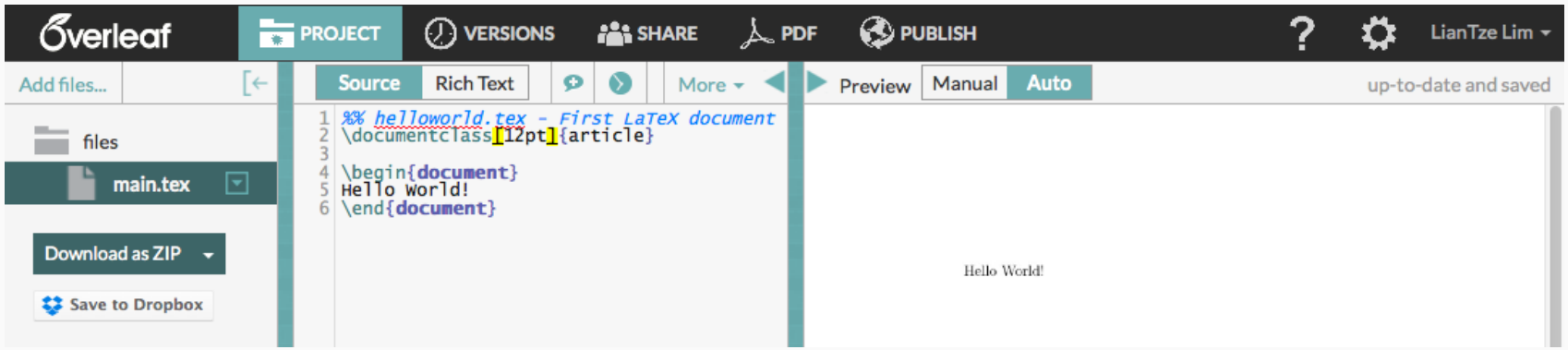




Tip: Ctrl + click in source to jump to corresponding point in PDF (and *vice versa*)

LaTeX Workflow in Overleaf

- 'Auto' mode: compiles and previews automatically as you edit
- 'Manual' mode: Ctrl + . to trigger compile



- Click in PDF to position cursor in Source.
- Right-click in Source code, Position in preview

LaTeX Basics

- Commands (0 or more options/arguments)

```
\cmdname[option1, option2...]{arg1}{arg2}...
```

- Environments

```
\begin{envname}
environment contents
\end{envname}
```

- Comments: the % character.

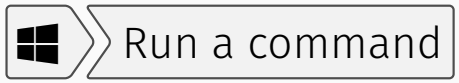
```
% You won't see this line in the output.
You will see this line %<-- but nothing after this!
```

Another example

```
%%%% document class declaration with options
\documentclass[a4paper,12pt]{article}

%%%% document preamble starts...
%% loading packages: for extra capabilities
\usepackage{marvosym}

%% "meta" information and other definitions
\author{Lim Lian Tze}
\title{Hello}

%%%% document preamble ends, document body starts
\begin{document}
\maketitle
Hello World! \Smiley
\end{document}
```

How do I know what commands hath a package?

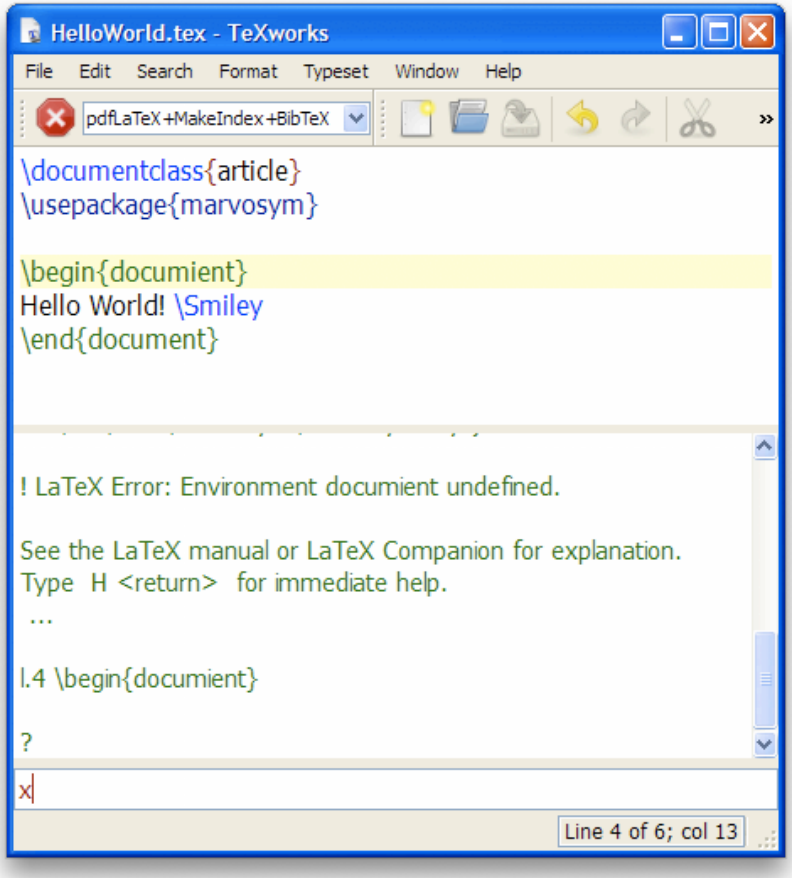
- Google!
- Package documentation

MikTeX  Run a command
then type `mthelp <package name>`
then pick usually the first file

TeXLive `$ texdoc <package name>`

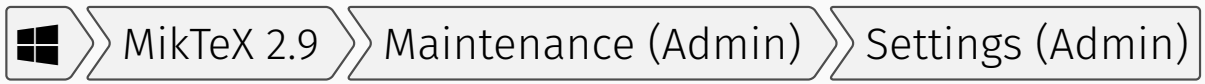
Online `http://texdoc.net/pkg/<package name>`

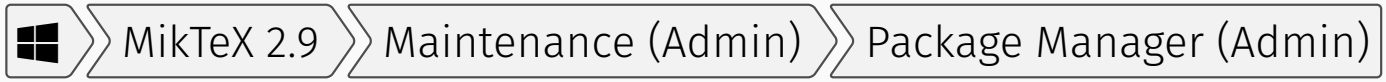
Aarrgggh! Errors!



- Error message and line number in the Output panel
- In the Console bar:
  - Hit Enter (perhaps repeatedly) to continue anyway. May still get a PDF output but with erroneous content.
  - Hit x then Enter, or click ✖ to abort.
- Correct error, retry.

Package Installation on MikTeX

- 

- Set On-the-fly installation to Yes or Ask me first.
- During compilation, missing packages will be installed on the fly. (But no progress bar...)
- 

- Install, delete packages from here, using the + and − buttons

Package Installation on Mac

- Start the TeX Live Utility
- Click on the `Pacakges` tab
- Install, delete packages from here (right-click on the required packages)

TEXT

White Space and New Lines

- Space and tab characters
  - White space does not (usually) matter
  - TEX determines inter-word spacing to ensure legibility

White Space and New Lines (cont.)

- Paragraph breaking
  - Leave a blank line between text to break paragraph
  - Multiple blank lines won't give more vertical spacing
  - TEX determines inter-line spacing to ensure legibility
  - Do not use \\ to create 'new paragraphs'!

White Space and New Lines (cont.)

- Manual line- and page-breaking?
  - (are you sure?)
  - TEX decides where to break lines, pages to ensure legibility
  - if you insist: `\\`, `\pagebreak`

Effects of White Space

```
This is to   demonstrate   % TODO: comments again!
typesetting plain text in \LaTeX. It doesn't care much about
multiple blank spaces and tabs.

``Multiple blank lines'' have the same effect as one blank line.


Blank lines are for separating paragraphs (content), but not
how far they are apart (style).
```

This is to demonstrate typesetting plain text in LaTeX. It doesn't care much about multiple blank spaces and tabs.
"Multiple blank lines" have the same effect as one blank line.
Blank lines are for separating paragraphs (content), but not how far they are apart (style).

Special Characters

#	(hash, pound)	:	`\#`
$	(dollar)	:	`\$`
%	(percent)	:	`\%`
^	(“hat”)	:	`\^{}`
&	(ampersand)	:	`\&`
_	(underscore)	:	`\_`
{	(left brace)	:	`\{`
}	(right brace)	:	`\}`
~	(tilde)	:	`\~{}`
∼	(wide tilde)	:	`$\sim$`
“	(open double quotes)	:	``` `` ```
”	(close double quotes)	:	`''`
@	(alias)	:	`\string@`

Verbatim text

```
\begin{verbatim}
"I'm tired of escaping characters!"
Type all the special characters you want, 100%!
No need to escape your # and $ and ^ here,
and it respects your line breaks
   and   whitespaces, too!
\end{verbatim}

Inline: \verb|mem_buffer|.
```

```
"I'm tired of escaping characters!"
Type all the special characters you want, 100%!
No need to escape your # and $ and ^ here,
and it respects your line breaks
   and   whitespaces, too!
```

Inline: `mem_buffer`.

URLs and File Paths

```
\usepackage{url,menukeys}   % this line in preamble!
...
You can find this presentation at
\url{http://liantze.googlepages.com/latextypesetting}.

Your MiKTeX installation is most likely at
\directory{C:/Program Files/MiKTeX 2.9}.

Oh and the menukeys package can do \menu{File > Save > Save
As...} and \keys{Ctrl + X}.
```

You can find these slides at
`http://liantze.googlepages.com/latextypesetting`.

Your MiKTeX installation might be at `C:▸Program Files▸MiKTeX 2.9`.

Oh and the menukeys package can do File » Save » Save As... and Ctrl + X.

Special Symbols: Characters with Diacritic Marks

- Diacritic marks: e.g. à, á, â, ã, ä, å, æ
  - no input methods: `\‘a, \’a, \^a, \~a, \”a, \r a, \ae`
  - with input methods: (TeXworks and Overleaf save files as UTF-8 by default)

```
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}
...
àáâãäåæ
```

More Special Symbols

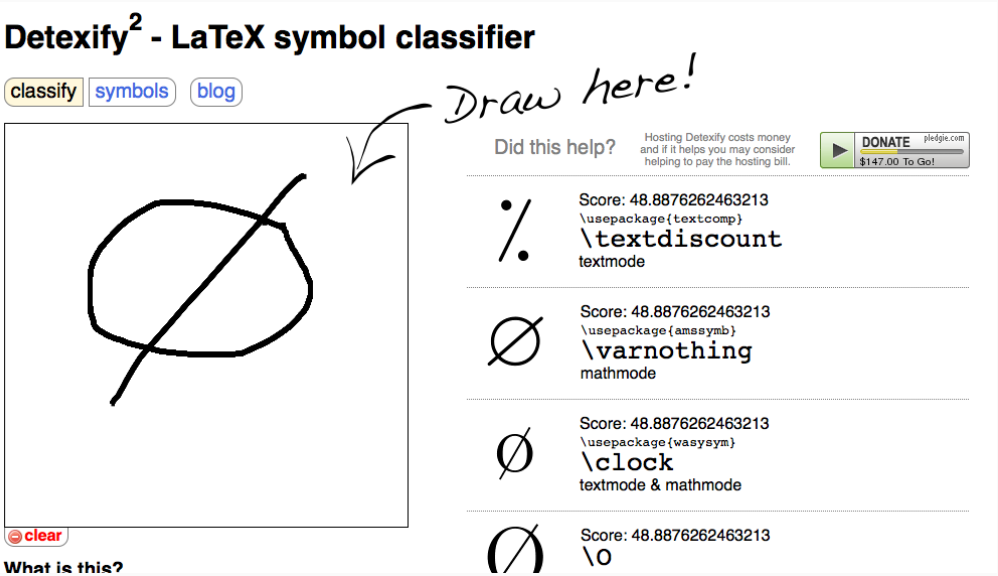
- Common text symbols: e.g. © ® ™ °

```
\textcopyright \textregistered \texttrademark \textdegree
```

- Mathematical symbols: a whole slew of them!
- "How would I know what command produces symbol *X*"?
  1. The Comprehensive LaTeX Symbol List
     (`http://www.texdoc.net/pkg/comprehensive`)

More Special Symbols (cont.)

2. Detexify (`http://detexify.kirelabs.org/`)



Font Families and Effects

`\textrm{roman}`	→ roman
`\textsf{sans serif}`	→ sans serif
`\texttt{typewriter}`	→ `typewriter`
`\textbf{bold}`	→ **bold**
`\textit{italics}`	→ *italics*
`\underline{underline}`	→ underline
`\textsc{Small Caps}`	→ Small Caps
`\emph{emphasis}`	→ *emphasis*

- Commands can be nested:
  `\texttt{\emph{Like this.}}` → *`Like this.`*

Font Sizes

Font size changing commands relative to base font size given in `documentclass` option

`{\tiny Text}`	→ Text
`{\scriptsize Text}`	→ Text
`{\footnotesize Text}`	→ Text
`{\small Text}`	→ Text
`{\normalsize Text}`	→ Text
`{\large Text}`	→ Text
`{\Large Text}`	→ Text
`{\LARGE Text}`	→ Text
`{\huge Text}`	→ Text
`{\Huge Text}`	→ Text

List-like Environments

Bulleted Lists

```
\begin{itemize}
\item one
\item two
\end{itemize}
```

- one
- two

Numbered Lists

```
\begin{enumerate}
\item one
\item two
\end{enumerate}
```

1. one
2. two

Description Lists

```
\begin{description}
\item[one] is here
\item[two] is there
\end{description}
```

one is here

two is there

Lists can be nested up to 6 levels deep.

More on Changing Fonts

- Default document font: Computer Modern (designed by Knuth)
  - Computer Modern Serif
  - Computer Modern Sans Serif
  - `Computer Modern Typewriter`
- Use Times Roman + Helvetica + `Courier` as default:

```
\usepackage{mathptmx}
\usepackage[scaled=.89]{helvet} % Helvetica is LARGE
\usepackage{courier}
```

- Other fonts can be loaded via relevant packages (`http://www.tug.dk/FontCatalogue/`)
- But be careful about improper font combinations!

STRUCTURE

Sectioning Commands

- `article`: `section`, `subsection`, `subsubsection`.
- `book`: `part` (not usually used), `chapter`, `section`, ...

```
\documentclass{article}

\begin{document}
\section{Introduction}
Introduce your topic here.

\section{Background}
A line or two.

\subsection{Related Work}
Review others' work.

\subsection{Problems}
Unresolved issues.
\end{document}
```

1 Introduction

Introduce your topic here.

2 Background

A line or two.

2.1 Related Work

Review others' work.

2.2 Problems

Unresolved issues.

Cross-referencing

```
\documentclass{article}
\begin{document}
\section{Introduction}\label{sec:intro}
Introduce your topic here.

\section{Background}
\label{sec:background}
Mention section \ref{sec:intro} again.

\subsection{Related Work}
\label{sec:related}
Review others' work.

\subsection{Problems}
\label{sec:problems}
In section \ref{sec:related} on page
\pageref{sec:related}\ldots
\end{document}
```

"Bookmark" with `\label`, reference with `\ref`, `\pageref`

1 Introduction

Introduce your topic here.

2 Background

Mention section 1 again.

2.1 Related Work

Review others' work.

2.2 Problems

In section 2.1 on page 1...

Other Goodies

- Author information (in preamble)
  - **`\author`**: Name(s) of authors
  - **`\title`**: Title of the article/book/report
  - **`\date`**: Specify a date
  - Other custom fields for respective journals, conference styles (refer to publisher's instructions and templates)

Other Goodies (cont.)

- Routine tasks (in document body)
  - Abstract:

```
\begin{abstract}
My text here.
\end{abstract}
```

  - Footnote: `...why?\footnote{why not?}`
  - Margin notes: `...why?\marginpar{why not?}`
  - Auto-generate title: `\maketitle`
  - Auto-generate TOC: `\tableofcontents` (`\listoffigures`,`\listoftables` – we'll try later)

PDF hyperlinks and bookmarks

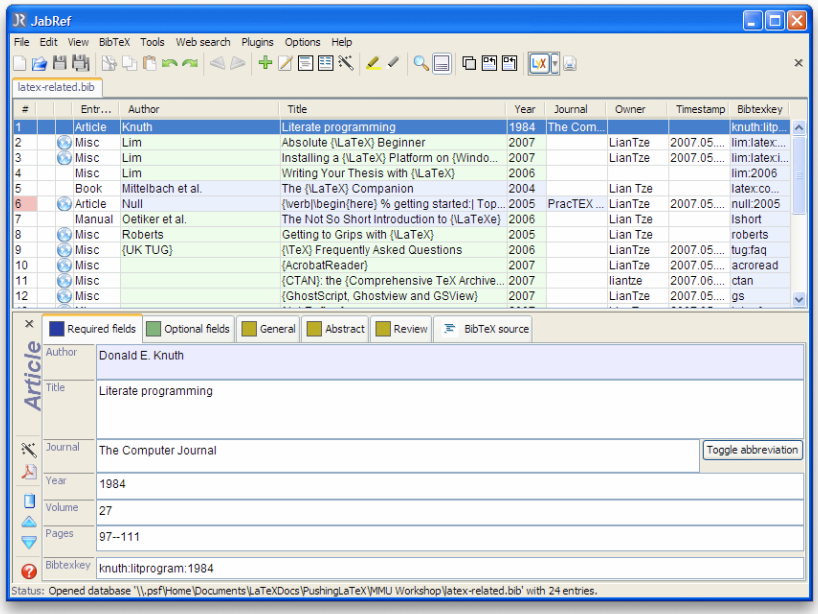
- Just load `hyperref` package
- But load it as *last* package!
- Coloured borders around links in PDF will not show up when printed, don't worry!

REFERENCES

External (Centralised) Reference Database

latex-related.bib

```
@ARTICLE{knuth:1984,
  author = {Donald E. Knuth},
  title = {Literate programming},
  journal = {The Computer Journal},
  year = {1984},
  volume = {27},
  number = {2},
  pages = {97--111},
  address = {Oxford, UK},
  publisher = {Oxford University
    Press}
}
```



JabRef: Java-based reference manager

http://jabref.sourceforge.net

Or use Mendeley, Zotero, CiteULike...
and export .bib ☺

Citing from External .bib File

```
\documentclass{article}

\begin{document}
\cite{latex:companion} is a useful book. Knuth
introduced the literate programming paradigm while
developing \TeX{}\ \cite{knuth:1984}.

\bibliographystyle{plain}
\bibliography{latex-related}
\end{document}
```

Unified Style

- Download from `http://celxj.org/` (Scroll to the bottom)
- Put `unified.bst` in the same folder as your `.tex`

```
\usepackage{natbib}

\cite{John1991}

\citet{John1991}

\citep{John1991}

\bibliographystyle{unified}
\bibliography{latex-related}
```

When changing bibliography styles, you may need to delete .bbl file manually

MLA Style

- Download from `https://www.ctan.org/tex-archive/biblio/bibtex/contrib/mla`
- Put `mla.bst` in the same folder as your `.tex`

```
\usepackage{mla}  % no natbib!!

\cite{John1991}

\bibliographystyle{mla}
\bibliography{latex-related}
```

natbib: Flexible Citations

- Recommended:
  - `\usepackage{natbib}` for author-year styles
  - `\usepackage{apacite}\bibliographystyle{apacite}`
- `natbib` citation commands:

  `\citep{knuth:1984}` → (Knuth, 1984)

  `\citet{knuth:1984}` → Knuth (1984)

  (Careful! `\cite` becomes `\citet` if using `natbib`!)

  `\citep[section 2.1]{knuth:1984}` → (Knuth, 1984, section 2.1)

  `\citeauthor{knuth:1984}` → Knuth

  `\citeyear{knuth:1984}` → 1984
- (`apacite` supports `\citeauthor` and `\citeyear` too)
- See also

  `http://en.wikibooks.org/wiki/LaTeX/Bibliography_Management`

Notes about Names

```
author = {John Doe}
```
→ (Doe, 2002)

```
author = {J. Doe}
```
→ (Doe, 2002)

```
author = {Doe, John}
```
→ (Doe, 2002)

```
author = {John von Neumann}
```
→ (von Neumann, 1945)

```
author = {Lim Lian Tze}
```
→ (Tze, 2004)

```
author = {Lim, Lian Tze}
```
→ (Lim, 2004)

```
author = {John Doe and Allen Smith and Lee, Ai Chong}
```
→ (Doe, Smith and Lee, 2003)

MATHS

Mathematics with amsmath package

```
\eqref{eq:golden:ratio:fibonacci} relates the golden ratio and
the Fibonacci series.  Recall that the golden ratio, $\phi =
\frac{1}{2} (1 + \sqrt{5})$.

\begin{equation}\label{eq:golden:ratio:fibonacci}
\phi = 1 + \sum^{\infty} _{n=1}
                \frac{ (-1)^{n+1} }{ F_n F_{n+1} }
\end{equation}
```

(1) relates the golden ratio and the Fibonacci series. Recall that the golden ratio, $\phi = \frac{1}{2}(1 + \sqrt{5})$.

$$\phi = 1 + \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{F_n F_{n+1}} \tag{1}$$

Source: http://mathworld.wolfram.com/GoldenRatio.html

...Too much “treasure” to describe here!

- `http://en.wikibooks.org/wiki/LaTeX/Mathematics`
- `http://www.andy-roberts.net/misc/latex/latextutorial9.html`, `latextutorial10.html`
- Scribble an equation, get the LaTeX code: `http://webdemo.myscript.com/#/demo/equation`

Another Maths Example

[…] A family of wavelets can be constructed from a function $\psi(x)$, sometimes known as a "mother wavelet," which is confined in a finite interval. "Daughter wavelets" $\psi^{a,b}(x)$ are then formed by translation (b) and contraction (a). […]
An individual wavelet can be defined by

$$\psi^{a,b}(x) = |a|^{-\frac{1}{2}} \psi\left(\frac{x-b}{a}\right).$$

Then

$$W_\psi(f)(a,b) = \frac{1}{\sqrt{a}} \int_{-\infty}^{\infty} f(t)\psi\left(\frac{t-b}{a}\right) dt,$$

and Calderón's formula gives

$$f(x) = C_\psi \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \langle f, \psi^{a,b}\rangle \psi^{a,b}(x) a^{-2}\, da\, db.$$

A common type of wavelet is defined using Haar functions.

Source: `http://mathworld.wolfram.com/Wavelet.html`

FIGURES & TABLES

Graphics File Format

`pdflatex` embeds JPG, PNG and PDF graphic files

```
\usepackage{graphicx}
...
\includegraphics[width=.3\textwidth]{NTU-logo}
```

(no file extension → automatically looks for `.jpg, .png, .pdf`)

Other ways to specify the size:
`width=5cm`, `height=120mm`, `scale=1.1` ...

Figures

```
\begin{figure}[hbt!]\centering
\includegraphics[width=.3\textwidth]{MMU}
\caption{MMU's logo}
\label{fig:mmu:logo}
\end{figure}

Figure \ref{fig:mmu:logo} depicts MMU's logo.
```

Figure 1: MMU's logo

Figure 1 depicts MMU's logo.

Tabular Material

```
\begin{tabular}{| l | c || r |}
\hline
one      &   two two        &  three three tree \\ \hline
one one &   two two two    &  three             \\ \hline
one one one &   two    &  three three       \\ \hline\hline
\multicolumn{2}{|l||}{In the end} & What?!    \\ \hline
\end{tabular}
```

one	two two	three three tree
one one	two two two	three
one one one	two	three three
In the end		What?!

Do yourself a favour and use

http://www.tablesgenerator.com/. ☺

Tables

```
\begin{table}[hbt!]\centering
\caption{Sample table}\label{tab:sample}
\begin{tabular}{| l | c || r |}
\hline
one      &   two two        &  three three tree \\ \hline
one one &   two two two   &  three              \\ \hline
\end{tabular}
\end{table}

Table \ref{tab:sample} is a very simple example.
```

Table 1: Sample table

one	two two	three three tree
one one	two two two	three

Table 1 is a very simple example.

MULTILINGUAL TEXT

Recap: Characters with Diacritic Marks

- Diacritic marks: e.g. à, á, â, ã, ä, å, æ
  - no input methods: `\‘a, \’a, \^a, \~a, \”a, \r a, \ae`
  - with input methods: (TeXworks and Overleaf save files as UTF-8 by default)

```
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}
...
àáâãäåæ
```

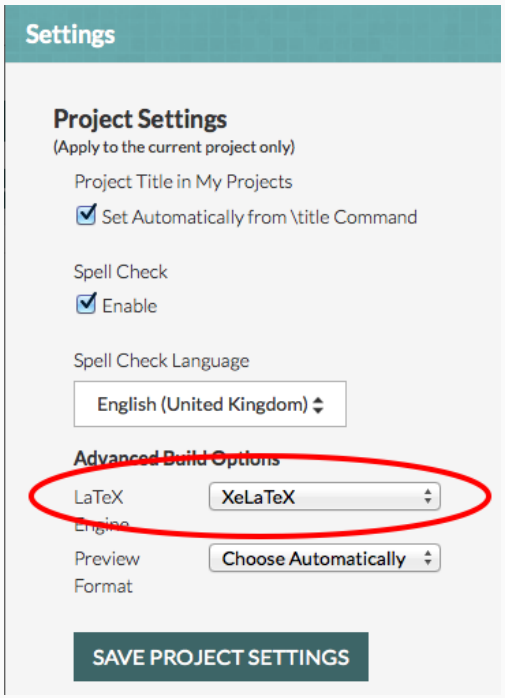
UTF-8 Engines

- or compile with XeLaTeX, LuaLaTeX engine – no need to load extra packages

  TeXworks Typeset operation set to XeLaTeX+MakeIndex+BibTeX

  Overleaf Settings » LaTeX engine = XeLaTeX

```
\documentclass{article}

\begin{document}
àáâãäåæ wheeee
\end{document}
```



Font Selection in XeLaTeX

```
\usepackage{fontspec}
\setmainfont[Ligatures=TeX]{Times New Roman}
\setsansfont{Arial}
\setmonofont{Consolas}
```

- Does the journal accept XeLaTeX?
- Does the journal have the necessary fonts?
- (Ask first...)

IPA Symbols: pdfLaTeX

```
\usepackage{tipa}

\textipa{f@”nEtIks}
```

- fəˈnɛtɪks
- Cheat sheet: http://www.ling.ohio-state.edu/events/lcc/tutorials/tipachart/tipachart.pdf

IPA Symbols: XeLaTeX

```
\usepackage{fontspec}
\newfontfamily{\ipafont}{Doulos SIL}

{\ipafont fəˈnetɪks}
```

- fəˈnetɪks
- Other IPA fonts:
  http://ipa4linguists.pbworks.com/w/page/4325763/Cool%20free%20IPA%20fonts%20to%20download

tipa + XeLaTeX

If you'd like to use **tipa** in XeLaTeX, use these code:

```
\usepackage{tipa}  % Must come before fontspec
\usepackage{fontspec}
\setmainfont[Ligatures=TeX]{Times New Roman}
...
\newfontfamily{\ipafont}{Doulos SIL}
\AtBeginDocument{
  \renewcommand\textipa[1]{{\ipafont\tipaencoding #1}}
}

% Both of the following will now work
{\ipafont fəˈnetɪks}
\textipa{f@”nEtIks}
```

Chinese in pdflatex: CJKutf8

```
\usepackage{CJKutf8}

\begin{CJK}{UTF8}{gbsn}
可以打中文吗？
\end{CJK}

\CJK{UTF8}{gkai}{竟然可以！}
```

可以打中文吗？

竟然可以！

Japanese, Korean in pdflatex: CJKutf8

```
%% Japanese. Try also maru, goth
\begin{CJK}{UTF8}{min}
露の世は　露の世ながら　さりながら
\end{CJK}
```

```
%% Korean
\begin{CJK}{UTF8}{mj}
편편황조 자웅상의 염아지독 수기여귀
\end{CJK}
```

CJK in XeLaTeX: xeCJK

- Default font: Fandol (Download from `http://www.ctan.org/tex-archive/fonts/fandol` and install in your OS!)

```
\usepackage{xeCJK}

一般字体为〖宋体〗。
强调用\textbf{〖黑体〗}。
中文没有斜体，要用\emph{〖楷体〗}。
代码可以用\texttt{〖仿宋〗}。
```

一般字体为〖宋体〗。无衬线体用〖**黑体**〗。中文没有斜体，要用〖楷体〗。代码可以用〖仿宋〗。

Using Other CJK Fonts

- (But does the other party esp. publishers have the same fonts?)

```
\setCJKmainfont[
  BoldFont={Adobe Heiti Std},
  ItalicFont={Adobe Kaiti Std]
    {Adobe Song Std}
\setCJKsansfont{Adobe Heiti Std}
\setCJKmonofont{Adobe Fangsong Std}

\newCJKfontfamily{\jpfont}{Meiryo}

{\jpfont 露の世は　露の世ながら　さりながら}
```

LINGUISTIC EXAMPLES AND INTERLINEAR GLOSSES

Packages for Linguistic Examples

`gb4e` very popular, but tends to have problems with new packages

`expex` newer, very flexible

So for each following example: `\usepackage{expex}`

Linguistic Examples

```
\ex
This is an example.
\xe

\ex
This is another example.
\xe
```

(1) This is an example.

(2) This is another example.

Example with Parts

```
\pex Here are two famous sayings.
\a A stitch in time saves nine.
\a Saved by the bell.
\xe
```

(3) Here are two famous sayings.

   a. A stitch in time saves nine.

   b. Saved by the bell.

Aligned Judgement Marks

```
\pex[*=?*]   %% Longest judgement mark
\a There is a pair of pants on the floor.
\a \ljudge{?*} There are a pair of pants on the floor.
\a \ljudge{*} There is the pair of pants on the floor.
\xe
```

(4) a. There is a pair of pants on the floor.

b. ?*There are a pair of pants on the floor.

c. *There is the pair of pants on the floor.

Interlinear Glosses

```
\ex\deftagex{basic}  %% \deftagex adds a label for referencing
\begingl
\gla An example formatted with expex //
\glb \textsc{an} example formatted \textsc{with} expex //
\glft ‘A free translation.’//
\endgl
\xe

We have our first glossing example (\getref{basic})!
```

Interlinear Glosses (cont.)

(5) *An example formatted with expex*
AN example formatted WITH expex

‘A free translation.’

We have our first glossing example (5)!

Four Lines Interlinear Glosses

```
\ex
\begingl
\gla Some authors like four lines //
\glb some {author -s} like four {line -s} //
\glc some {author \textsc{-pl}} like four {line
\textsc{-pl}}//
\glft Some authors like an extra line for morpheme
breaks. This is OK.//
\endgl
\xe
```

Four Lines Interlinear Glosses (cont.)

(6) *Some authors like four lines*
some author -s like four line -s
some author -PL like four line -PL

Some authors like an extra line for morpheme breaks.

More Goodies for Linguists

See http://en.wikibooks.org/wiki/LaTeX/Linguistics

SLIDES

Creating Presentations with beamer

- Quite a few choices to creating presentation slides...
- ...but **beamer** is (one of the) most versatile
  (the manual has 200+ pages; use as a reference)
- This presentation was created with **beamer**!
- To run slideshow in Acrobat Reader:
  - Ctrl + L to go fullscreen
  - Spacebar or arrow keys (←→) to go to next/previous slide
  - Esc to exit slideshow

Simple beamer Example

```
\documentclass{beamer}

\author{Lian Tze}
\title{Quick Beamer Example}
\institute{NLP-SIG, MMU}
\date{8 March 2010}

\begin{document}

\begin{frame}
\maketitle
\end{frame}

\section{Introduction}
\subsection{Hello!}
```

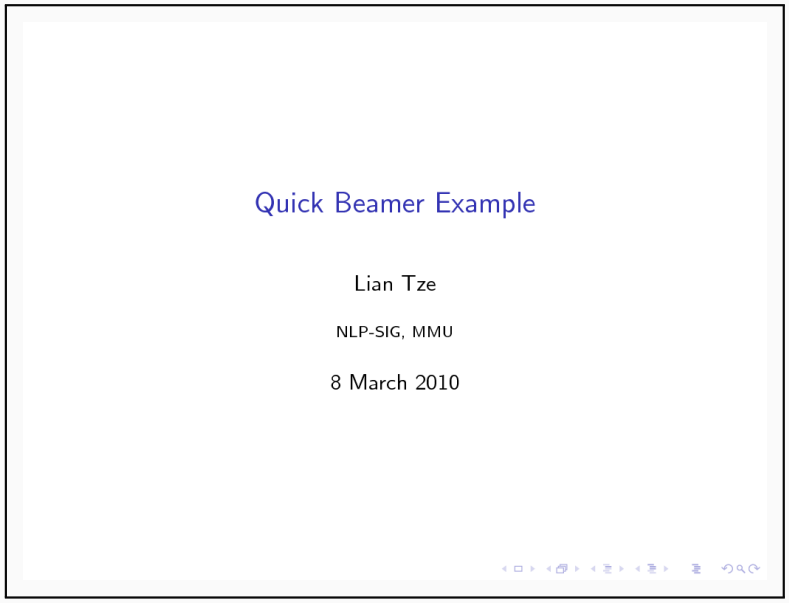
Simple beamer Example (cont.)

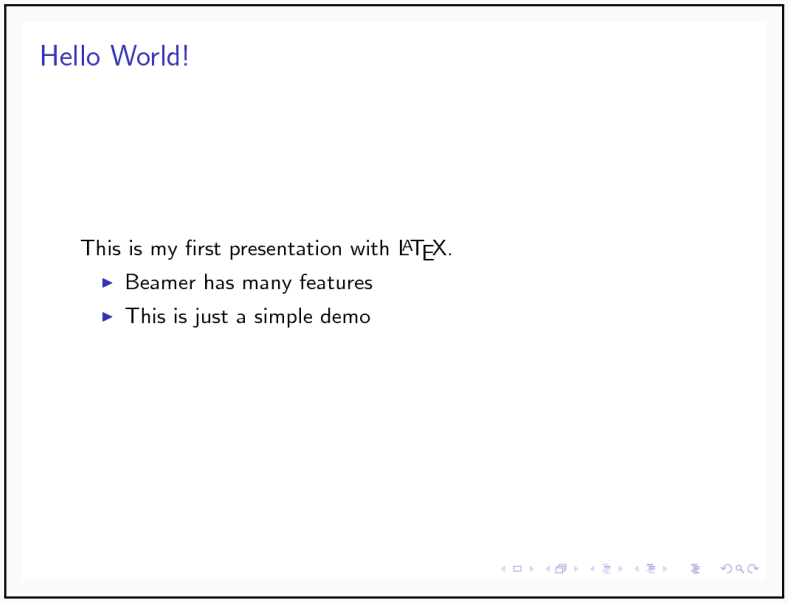
```
\begin{frame}
\frametitle{Hello World!}

This is my first presentation with \LaTeX.

\begin{itemize}
\item Beamer has many features
\item This is just a simple demo
\end{itemize}
\end{frame}

\subsection{Maths}
\begin{frame}
\frametitle{Maths work, too}
\begin{equation}
```

Simple beamer Example (cont.)

```
y = ax^2 + bx + c
\end{equation}
\end{frame}

\section{Conclusion}
\begin{frame}
\frametitle{It's Your Decision}
\begin{itemize}
\item Give \LaTeX\ a try
\item You might hate it, you might love it
\item Now that you've tried it, you can decide if it's
for you
\end{itemize}
\end{frame}

\end{document}
```

Simple beamer Example (cont.)





Simple beamer Example (cont.)

Maths work, too

$$y = ax^2 + bx + c \tag{1}$$

It's Your Decision

- Give LaTeX a try
- You might hate it, you might love it
- Now that you've tried it, you can decide if it's for you

Making items appear one by one

(Only applicable for `itemize`/`enumerate`!)

```
\begin{itemize}[<+->]
\item Beamer has many features
\item This is just a simple demo
\item Have a go!
\end{itemize}
```

Order of appearance

```
\begin{itemize}
\item<1-> Beamer has many features
\item<3-> This is just a simple demo
\item<2-> Have a go!
\end{itemize}
```

Or just pausing at a specific point

```
\begin{itemize}
\item Beamer has many features
\item This is just a simple demo
\pause
\item Have a go!
\end{itemize}
```

When Printing...

- You probably won't want the animated bullets one by one, so use the `trans` mode: `\documentclass[...,trans]{beamer}`
- Add these code for printing 4-up slides in `handout` mode:

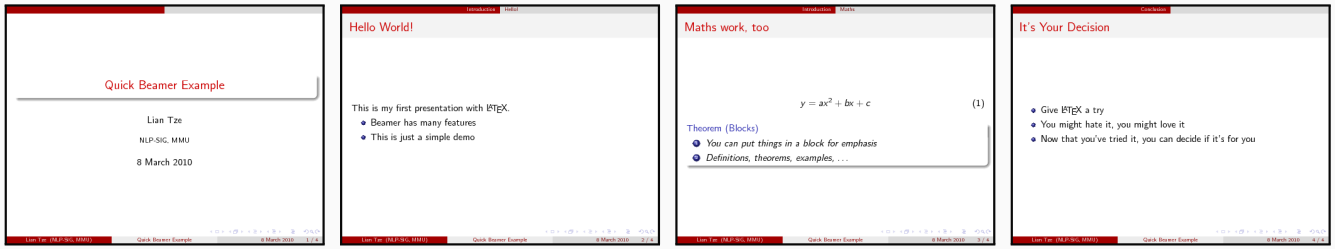
```
\documentclass[...,handout]{beamer}
\mode<handout>{
  \usepackage{pgfpages}
  \pgfpagesuselayout{4 on 1}[a4paper,landscape,border
  shrink=8mm]
}
```

Beamer Presentation Themes

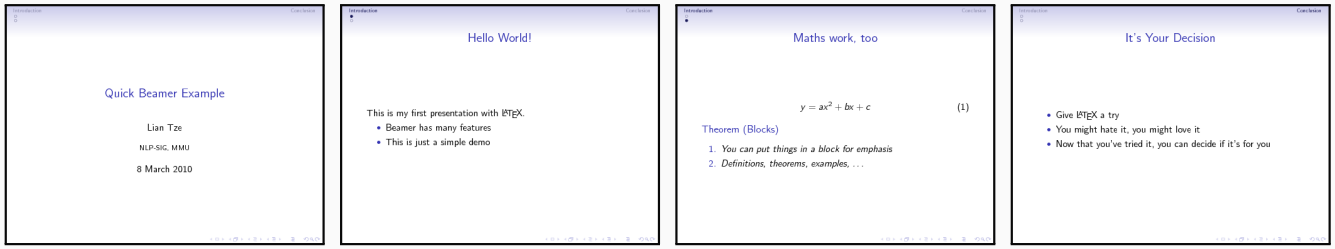
- Try these:
  - `\usetheme{CambridgeUS}`
  - `\usetheme{Singapore}`
  - `\usetheme{Montpellier}`
  - `\usetheme{Warsaw}`
  - `\usetheme{Goettingen}`
- Colour schemes, e.g. `\usecolortheme{crane}`
- `http://www.hartwork.org/beamer-theme-matrix/`
- Other customisations, including defining your own themes
- Try googling for more themes; e.g.
  `http://staff.science.uva.nl/~koppejan/misc/latex.html`

Beamer Presentation Themes (cont.)

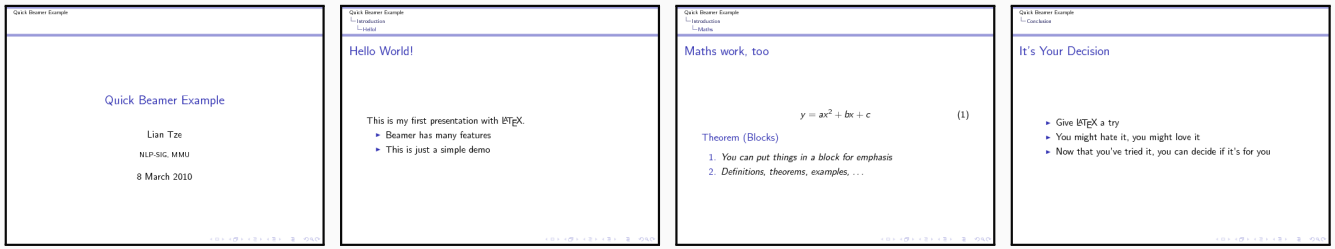
CambridgeUS



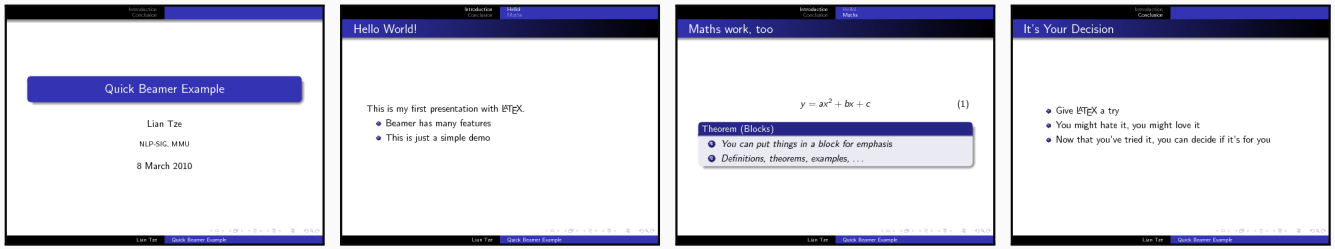
Singapore



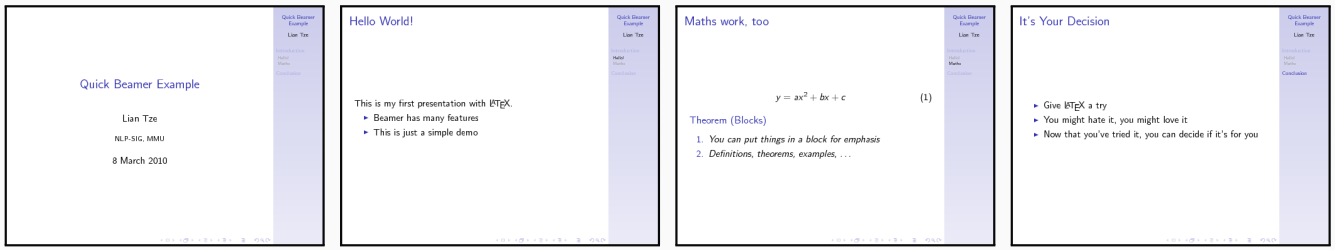
Montpellier



Warsaw

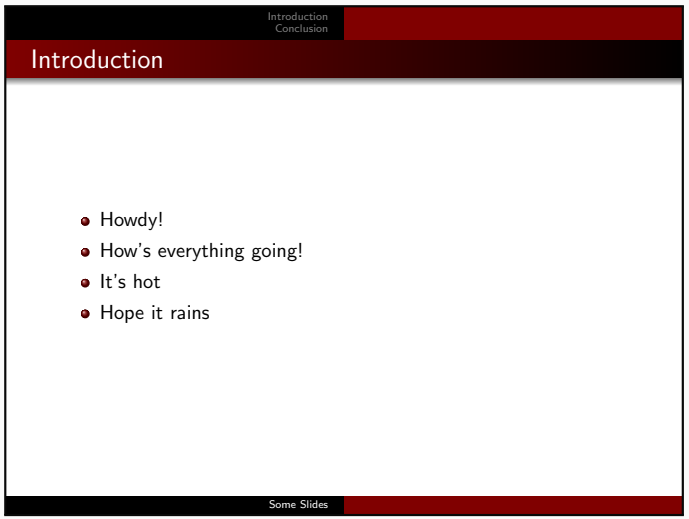


Goettingen



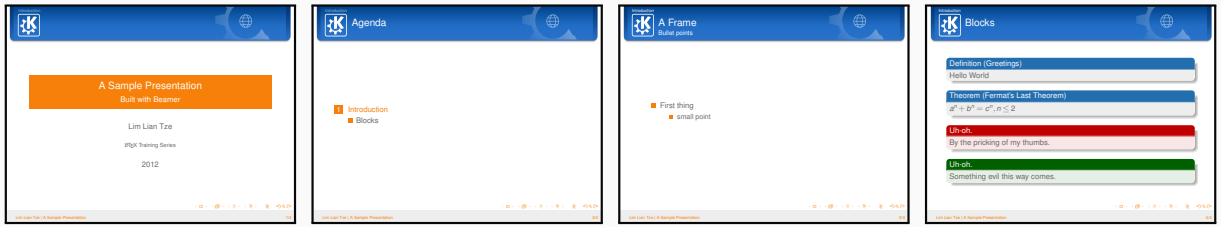
Just changing the main colour scheme

```
\documentclass[xcolor={dvipsnames,x11names,svgnames}]
  {beamer}

\usetheme{Singapore}
\usecolourtheme[named=Maroon]{structure}
```

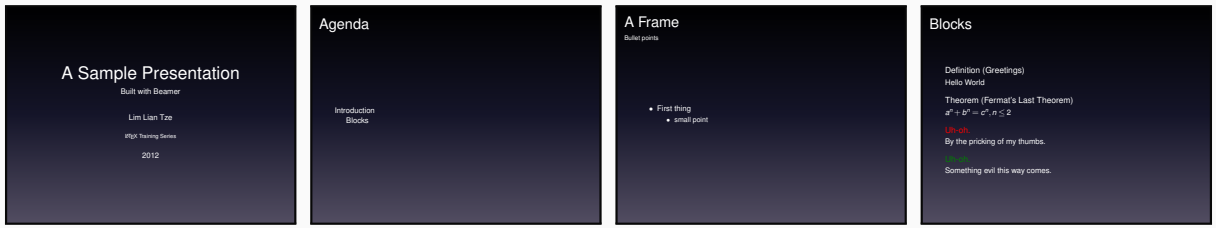


See `http://texdoc.net/pkg/xcolor` pp. 38–40 for pre-defined colour names

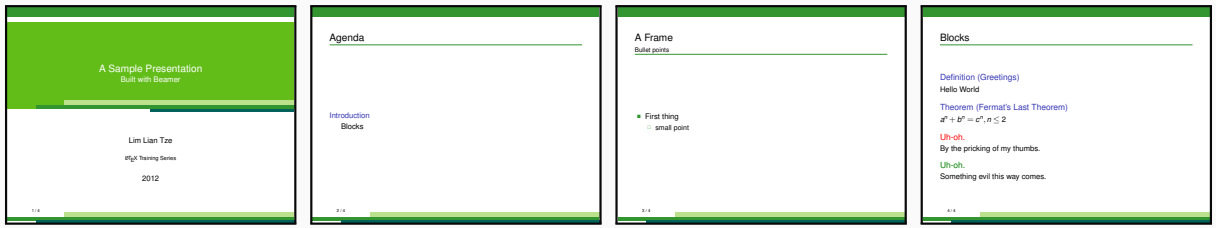
Other Themes from the Web



oxygen (KDE): `http://www.kde.org/kdeslides/`

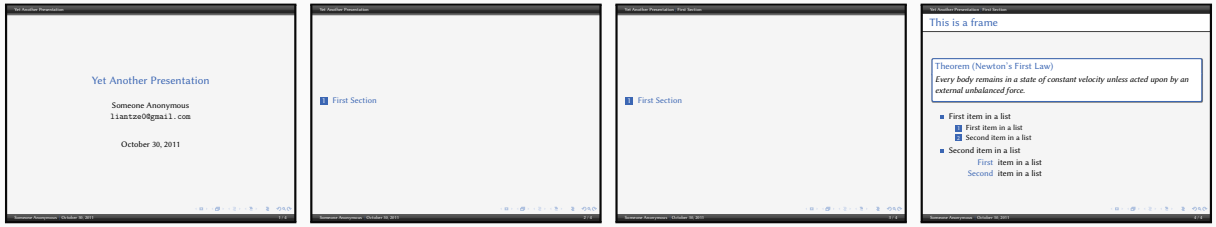


Manhattan: (Keynote look-alike) `http://blog.hartwork.org/?p=435`



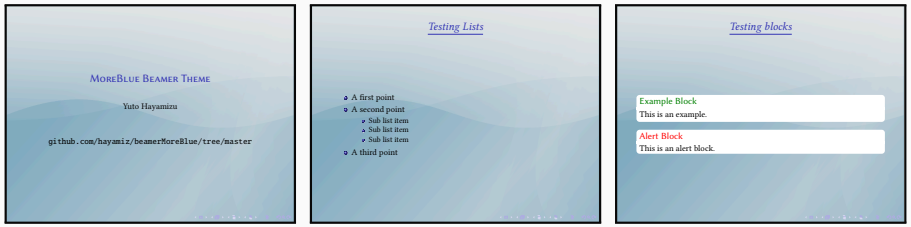
Torino: `http://blog.barisione.org/2007-09/torino-a-pretty-theme-for-latex-beamer/`

Other Themes from the Web (cont.)



Wuerzburg: `http://www.cgogolin.de/Computer.html`

Blackboard: `github.com/kmaed/kmbeamer/archive/master.zip`



MoreBlue: `github.com/hayamiz/beamerMoreBlue/archive/master.zip`

These slides: mtheme `https://github.com/matze/mtheme`

‘HIDDEN TRACK’: OVERSIZED POSTERS

Creating Oversized Academic Posters with LaTeX

- Many classes to use, no clear-cut ‘winner’
- But `beamerposter` seems to be slightly more popular
- Themes available from the Internet
  - Each may have slightly different ways to use
  - Best work from the accompanying sample code

Creating a beamerposter with LLT-poster Theme

```
\documentclass{beamer}
% Adjust size, orientation per organiser instructions; Use
scale to get larger font sizes
\usepackage[size=a1,orientation=portrait,scale=1.8]{beamerposter}
\usetheme{LLT-poster}
\usecolortheme{ComingClean}
%% Alternative colour themes: ConspiciousCreep; Entrepreneur

% (Only for this theme) The ‘short’ author name is ‘hijacked’
for the e-mail
\author[liantze@gmail.com]{Lim Lian Tze}
\title{Yet Another Beamer Poster Theme}
\institute{Multimedia University, Malaysia}

% (Only for this theme) You can put a graphics in the lower
right hand corner
\footimage{\includegraphics[height=15cm]{liantze}\hspace*{2em}}
```

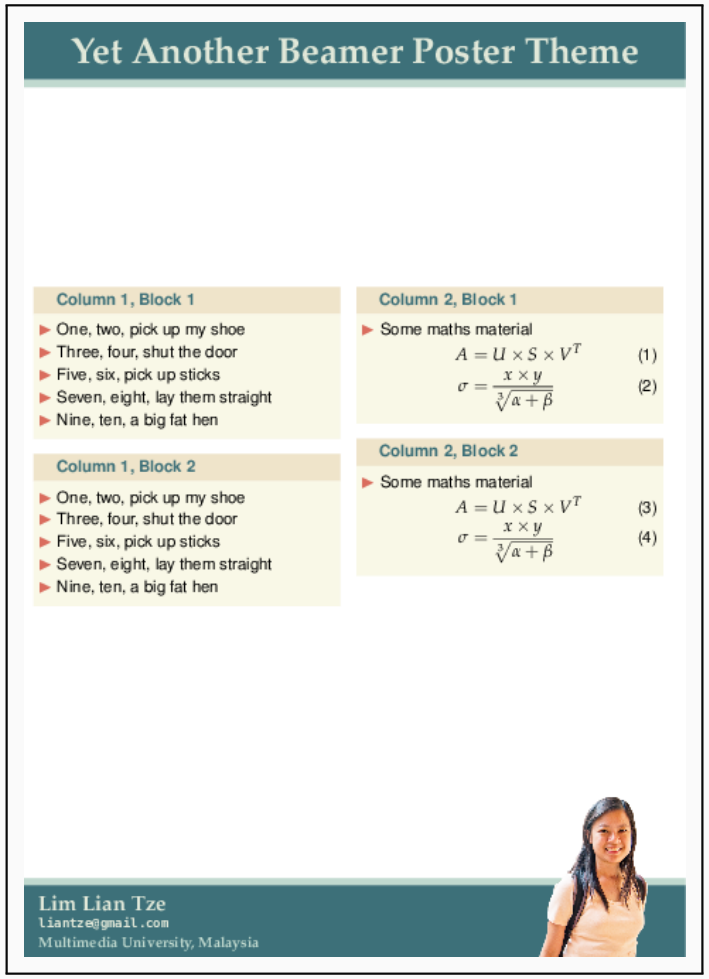
(cont.)

```
\begin{document}
\begin{frame}\centering

\begin{columns}[T]
\begin{column}{.46\textwidth}

\begin{block}{Column 1, Block 1}
...
\end{block}

\begin{block}{Column 1, Block 2}
...
\end{block}
\end{column}
```

```
\begin{column}{.46\textwidth}

\begin{block}{Column 2, Block 1}
...
\end{block}

\begin{block}{Column 2, Block 2}
...
\end{block}

\end{column}
\end{columns}

\end{frame}
\end{document}
```

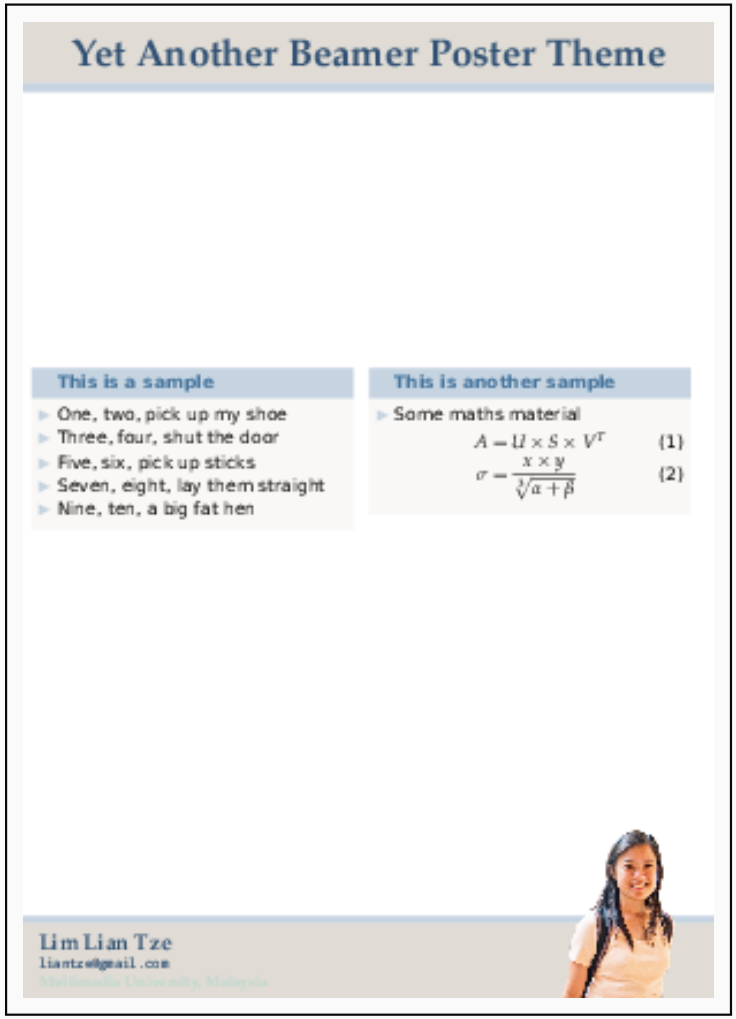
Download from `http://goo.gl/gjjjq0`

Sample Output



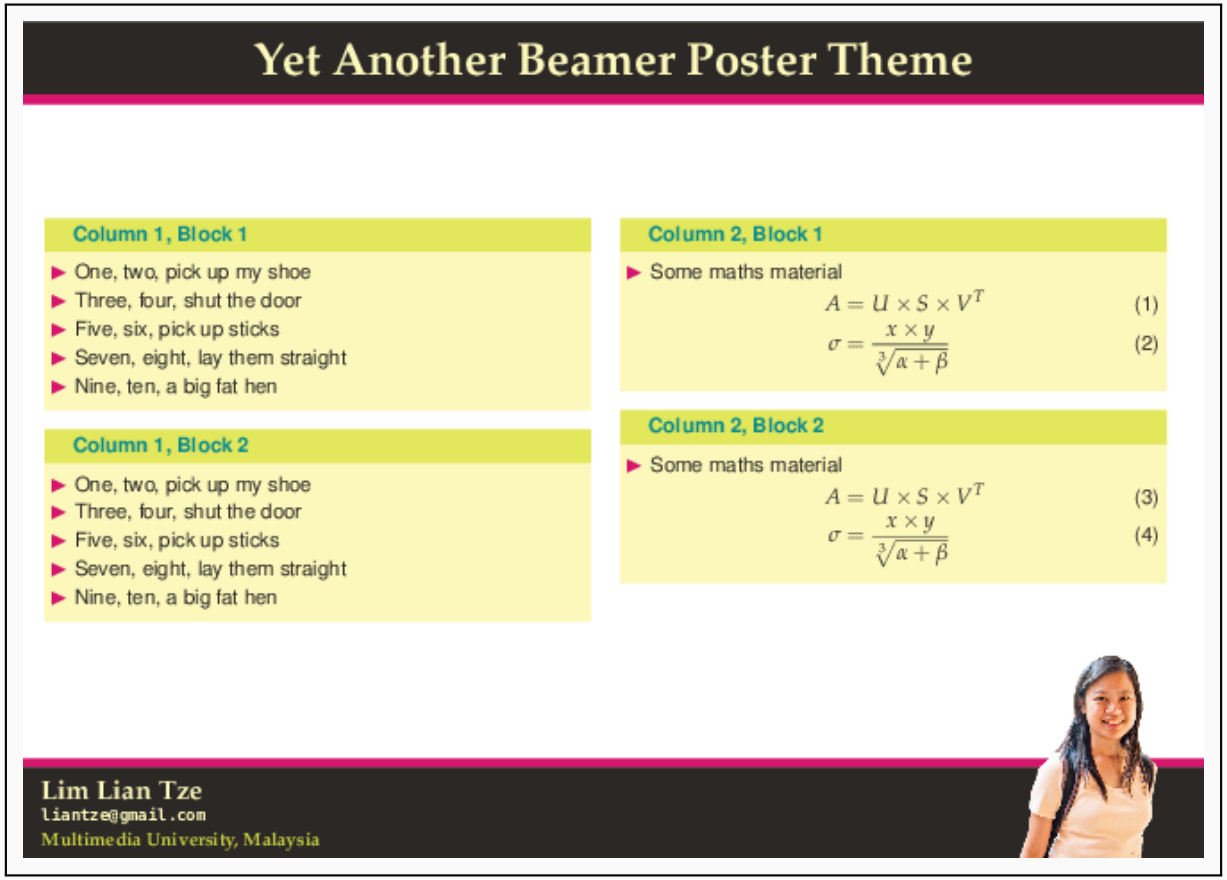
`ComingClean` colour theme

Sample Output (cont.)



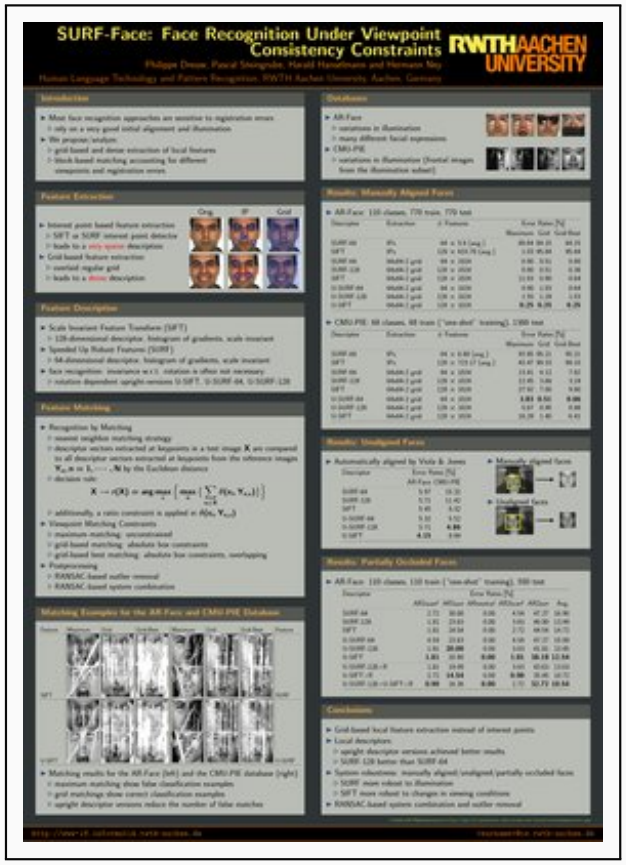
alternative `Entrepreneur` colour theme

Sample Output (cont.)



`landscape` and alternative `ConspiciousCreep` colour theme

Other Themes from the Net



http://goo.gl/G1C1A

http://goo.gl/PkdO6

More may be found from the Net


धन्यवाद
감사합니다
Ευχαριστώ
Terima kasih
谢谢
Danke
Grazie
qatlho’
Obrigado
Спасибо
Thank you
நன்றி
ขอบคุณ
Gracias
Xin cảm ơn
ありがとう
Merçi
شكرا
Go raibh maith agaibh
Tapadh leibh
ཐུགས་རྗེ་ཆེ།