# Introduction to LaTeX

## A very short briefing

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Physical Sciences Coordinator
Regional Organizer: Asia and Oceania
Head of Website Maintenance
University of Edinburgh **Mathematical Physics** Y1

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# Sample frame title

LaTeX is a very popular and useful Language. Indeed, this very slide itself is created using LaTeX beamer.

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# Features

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- Footnote
- Bonus Session for Texmaker Users

# Preample

- Below is an example of a **Preample**

```
\documentclass{article}
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{parskip}
\usepackage [utf8] {inputenc}
\usepackage{titlesec}
\setcounter{secnumdepth}{4}
\titleformat{\paragraph}
{\normalfont\normalsize\bfseries}{\theparagraph}{1em}{}
\titlespacing*{\paragraph}
{0pt}{3.25ex plus 1ex minus .2ex}{1.5ex plus .2ex}
\newcommand{\ie}{\textit{i}.\textit{e}. }
\title{Introductory Astrophysics (PHYS08050) Notes}
\author{Henry Yip
s2231321@ed.ac.uk
}
```

## Components

- \documentclass{}

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- Title, Author, Date...
- \begin{document}

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- Example: \documentclass[**Option 1, Option 2**]{article}

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- **usepackage**{**amsmath**} and **usepackage**{**amssymb**} are almost always required.
- **Tikz** is preferred if you want to draw graphs
- Below is a beautiful example!

# More on Packages

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- You can **always** find your answer in Stackexchange

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## Preample

- \documentclass{beamer}

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## Important Notice

Try not to use powerpoint slides for your Math-related presentations

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- \usecolortheme{default}

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- Always include **maketitle** after **begin**{**document**}

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- You can make your equations aligned also:

$$\Delta K = \frac{dK}{dR}\Delta R \tag{1}$$

$$= -\frac{GM\Delta m}{2R^2}\Delta R \tag{2}$$

$$\Delta U = \frac{dU}{dR}\Delta R \tag{3}$$

$$= -\frac{GM\Delta m}{R^2}\Delta R \tag{4}$$

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- You can find more in Overleaf's website

# Inserting pics

- First, upload your images to **Overleaf**

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- Second, include this line:
  - \includegraphics[scale= 1]{Preample.png}

# Hyperlink

- First include the following packages in the **Preamble**

```
\usepackage{hyperref}
\hypersetup{
    colorlinks=true,
    linkcolor=blue,
    filecolor=magenta,
    urlcolor=cyan,
    pdftitle={Overleaf Example},
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```
\begin{itemize}
\item Go to \href{https://www.overleaf.com/login}{the login page of Overleaf}
\item Create a New Account \footnote{You'll likely obtain a professional acco
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# Footnotes

- Just type down \footnote {}

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# Table

- You can make very nice tables with LaTeX

| **Time** | **Activity** | **Remarks** |
|---|---|---|
| 7:00 | Train in **Glascow**/Paris | |
| 12:00 | Arriving in **King's Cross Station** | |
| 12:30 | Check in | |
| 13:00-14:00 | Lunch | |
| 15:00-18:45 | Hong Kong Disneyland | Walk Around |
| 19:15-20:45 | Dinner | |

# More on Tables

```
\begin{table}[H]
  \begin{center}
    \begin{tabular}{c|c|c}
      \textbf{Time} & \textbf{Activity}&\textbf{Remarks}\\
      \hline\hline
      7:00 & Train in \textbf{Glascow}/Paris& \\
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      12:30 & Check in & \\
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      \hline
      15:00-18:45 & Hong Kong Disneyland & Walk Around\\
      \hline
      19:15-20:45 & Dinner &\\
      \hline

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\end{table}
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- Above is how you should type

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\begin{table}[H]
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      \hline

    \end{tabular}
  \end{center}
\end{table}
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- To adjust position please download \usepackage{float}

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- I understand that most of you are Overleaf users, but this section is for TexMaker users
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- Then type **pdflatex nameofyourdocument.tex**
- You can also click "View" in TexMaker, then "print" and then "Microsoft Print to Pdf". However, at least for me, the hyperlinks may be lost.

# Approaching The End!

## Questions

If you have any Questions feel free to ask me now!

Thank You!