

Università degli Studi di Cagliari

Using \LaTeX to prepare slides

Master's Degree in Computer Engineering, Cybersecurity and
Artificial Intelligence

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This template is based on [SINTEF Presentation](#) from [Federico Zenith](#) and its derivation [Beamer-LaTeX-Themes](#) from Liu Qilong and Andrea Gasparini

In the following you find a brief introduction on how to use \LaTeX and the beamer package to prepare slides, based on the one written by [Federico Zenith](#) for [SINTEF Presentation](#)

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Beamer for SINTEF slides

1 Introduction

- We assume you can use \LaTeX ; if you cannot, [you can learn it here](#)
- Beamer is one of the most popular and powerful document classes for presentations in \LaTeX
- Beamer has also a detailed [user manual](#)
- Here we will present only the most basic features to get you up to speed



Beamer vs. PowerPoint

1 Introduction

Compared to PowerPoint, using \LaTeX is better because:

- It is not What-You-See-Is-What-You-Get, but What-You-Mean-Is-What-You-Get: you write the content, the computer does the typesetting
- Produces a pdf: no problems with fonts, formulas, program versions
- Easier to keep consistent style, fonts, highlighting, etc.
- Math typesetting in \TeX is the best:

$$i \hbar \frac{\partial}{\partial t} \Psi(\mathbf{r}, t) = \frac{\hbar^2}{2m} \nabla^2 \Psi(\mathbf{r}, t) + V(\mathbf{r}) \Psi(\mathbf{r}, t)$$



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Getting Started

Selecting the SINTEF Theme

To start working with `si ntefbeamer`, start a \LaTeX document with the preamble:

Minimum SINTEF Beamer Document

```
\documentclass{beamer}
\usetheme{si ntef}
\begin{document}
\begin{frame}{Hello, world!}
\end{frame}
\end{document}
```



To set a typical title page, you call some commands in the preamble:

The Commands for the Title Page

```
\title{Sample Title}  
\subtitle{Sample subtitle}  
\author{First Author, Second Author}  
\date{\today} % Can also be (ab)used for conference name &c.
```

You can then write out the title page with `\maketitle`.

To set a **background image** use the `\titlebackground` command before `\maketitle`; its only argument is the name (or path) of a graphic file.

If you use the **starred version** `\titlebackground*`, the image will be clipped to a split view on the right side of the title slide.



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Writing a Simple Slide

It's really easy!

- A typical slide has bulleted lists



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- These can be uncovered in sequence



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Writing a Simple Slide

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Code for a Page with an Itemised List

```
\begin{frame}{Writing a Simple Slide}  
  \framesubtitle{It's really easy!}  
  \begin{itemize}[<+>]  
    \item A typical slide has bulleted lists  
    \item These can be uncovered in sequence  
  \end{itemize}\end{frame}
```

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Changing Slide Style

2 Personalization

- You can select the white or *maincolor* **slide style** in the preamble with `\themecolor{white}` (default) or `\themecolor{main}`
 - You should *not* change these within the document: Beamer does not like it
 - If you *really* must, you may have to add `\usebeamercol[fg]{normal text}` in the slide
- You can change the **footline colour** with `\footlinecolor{color}`
 - Place the command *before* a new frame
 - There are four “official” colors:  `maincolor`,  `sintefyellow`,  `sintefgreen`,  `sintefdarkgreen`
 - Default is no footline; you can restore it with `\footlinecolor{}`
 - Others may work, but no guarantees!
 - Should *not* be used with the `maincolor` theme!



Standard Blocks





These have a color coordinated with the footline (and grey in the blue theme)

```
\begin{block}{title}
content...
\end{block}
```

Colour Blocks

Similar to the ones on the left, but you pick the colour. Text will be white by default, but you may set it with an optional argument.









```
\begin{colorblock}[black]{sinteflightgreen}{title}
content...
\end{colorblock}
```

The “official” colours of colour blocks are:  `sinteflightgreen`,  `maincolor`,  `sintefdarkgreen`, and  `sintefyellow`.



Using Colours









2 Personalization

- You can use colours with the `\textcol or{<col or name>}{text}` command
- The colours are defined in the `si ntefcol or package`:
 - Primary colours:  `mai ncol or` and its sidekick  `si ntefgrey`
 - Three shades of green:  `si ntefl ightgreen`,  `si ntefgreen`,
 `si ntefdarkgreen`
 - Additional colours:  `si ntefyel low`,  `si ntefred`,  `si ntefl ill a`
These may be shaded—see the `si ntefcol or` documentation or the [SINTEF profile manual](#)
- Do *not* abuse colours: `\emph{}` is usually enough
- Use `\al ert{}` to bring the focus somewhere



Using Colours

2 Personalization

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These may be shaded—see the `si ntefcol or` documentation or the [SINTEF profile manual](#)
- Do *not* abuse colours: `\emph{}` is usually enough
- Use `\al ert{}` to bring the focus somewhere
- If you highlight too much, you don't highlight at all!



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Adding images

2 Personalization

Adding images works like in normal \LaTeX :

Code for Adding Images

```
\usepackage{graphicx}  
% ...  
\includegraphics[width=\textwidth]  
{assets/logo_RGB}
```



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Splitting in Columns

2 Personalization

Splitting the page is easy and common; typically, one side has a picture and the other text:

This is the first column

And this the second

Column Code

```
\begin{col umns}
  \begin{col umn}{0.6\textwi dth}
    This is the first col umn
  \end{col umn}
  \begin{col umn}{0.3\textwi dth}
    And thi s the second
  \end{col umn}
  % There coul d be more!
\end{col umns}
```

Special Slides

2 Personalization

- Chapter slides
- Side-picture slides










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Chapter slides

2 Personalization

- Similar to frames, but with a few more options
- Opened with `\begin{chapter}[<image>]{<color>}{<title>}`
- Image is optional, colour and title are mandatory
- There are seven “official” colours:  `maincolor`,  `sintedarkgreen`,  `sintefgreen`,  `sinteflightgreen`,  `sintefred`,  `sintefyellow`,  `sinteflila`.
 - Strangely enough, these are *more* than the official colours for the footline.
 - It may still be a nice touch to change the footline of following slides to the same color of a chapter slide. Your choice.
- Otherwise, chapter behaves just like frame.



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Side-Picture Slides

2 Personalization

- Opened with
`nbeg in fsi depi cgf<i mage>gf<ti tle>g`
- Otherwise, si depi c works just like frame





Fonts

2 Personalization

- The paramount task of fonts is being readable
- There are good ones...
 - Use serif fonts only with high-definition projectors
 - Use sans-serif fonts otherwise (or if you simply prefer them)
- ... and not so good ones:
 - Never use monospace for normal text
 - Gothic, calligraphic or weird fonts should always be avoided



Look

2 Personalization

- To insert a final slide with the title and final thanks, use `\backmatter`.
 - The title also appears in footlines along with the author name, you can change this text with `\footlinepayoff`
 - You can remove the title from the final slide with `\backmatter[notitle]`
- The aspect ratio defaults to 16:9, and you should not change it to 4:3 for old projectors as it is inherently impossible to perfectly convert a 16:9 presentation to 4:3 one; spacings *will* break
 - The `aspectratio` argument to the `beamer` class is overridden by the SINTEF theme
 - If you *really* know what you are doing, check the package code and look for the `geometry` class.

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Good Luck!

3 Summary

- Enough for an introduction! You should know enough by now
- If you have any suggestions or corrections, feel free to contribute on the [GitHub repository](#)! You can [open an issue](#) or [fork the project](#) and directly propose your changes with a Pull Request.

Università degli Studi di Cagliari *Thank you*

for listening!
Any questions?