

# Creating Presentations, Posters & Resume in $\text{\LaTeX}$

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# Outline of Talk

## 1 Motivation

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2 Sample Presentation

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2 Sample Presentation

3 Themes

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- 2 Sample Presentation
- 3 Themes
- 4 Boxes

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- 8 Structuring a Presentation: Columns, Spaces & Alignments

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## Advantages:

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- Beamer comes with a wide range of predefined themes.

## Disadvantages:

- Not as “point-and-click” as Power Point;
- Basic knowledge of  $\text{\LaTeX}$  is required.

# Sample Presentation

## Input Tex File

```
1 \documentclass{beamer}
2 \usepackage[T1]{fontenc}
3 \usepackage[utf8]{inputenc}
4 \usepackage{modern}
5 \title[short title]{Long Title}
6 \author[Short Author Name/Speaker Name]{Long Author Name/Speaker Name}
7 \begin{document}
8 \begin{frame}
9 \maketitle
10 \end{frame}
11 \end{document}
```

## Output

Long Title

Long Author Name/Speaker Name

January 30, 2018

# The Frame

A frame defines one “page” (slide) of the presentation.

## Input Tex File

```
\begin{frame}
  \frametitle{Frame Title}
  \framesubtitle{Frame Subtitle}
  \blindtext
\end{frame}
```

## Output

Frame Title

Frame Subtitle

Loreum ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Loreum ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

# Themes

For the appearance of the presentation you can select predefined **themes** of the Beamer class. Thereby, Beamer classifies five Categories:

## Categories of Themes:

- ① **Presentation Themes:** slide template
- ② **Color Themes\***: color scheme of slide template
- ③ **Font Themes\***: defines the fonts
- ④ **Inner Themes\***: defines inside of slide like of bullets, boxes, etc.
- ⑤ **Outer Themes\***: defines outside of slide like head- and footlines

(\* are optional, if you don't like the default settings of Presentation themes)

# Themes - Presentation Themes

Specifies the slide template of the entire presentation:

```
\usepackage[...]{Berkeley}
```

Presentation Themes (many are named after cities):

Ann Arbor	Antibes	Bergen	Berkeley	Berlin
Boadilla	boxes	CambridgeUS	Copenhagen	Darmstadt
default	Dresden	Frankfurt	Goettingen	Hannover
Ilmenau	JuanLesPins	Luebeck	Madrid	Malmoe
Marburg	Montpellier	Palo Alto	Pittsburgh	Rochester
Singapore	Szeged	Warsaw		

# Using Themes

## Input Tex File

```
1 \documentclass{beamer}
2 \usetheme{Stockton}
3 \usepackage[T1]{fontenc}
4 \usepackage[utf8]{inputenc}
5 \usepackage{hyperref,graphicx}
6 \usepackage{blindtext}
7 \title[short title]{Long Title}
8 \author[Short Author Name/Speaker Name]{Long Author Name/Speaker Name}
9 \begin{document}
10 \begin{frame}
11 \maketitle
12 \end{frame}
13
14 \begin{frame}
15 \frametitle{Frame Title}
16 \framesubtitle{Frame Subtitle}
17 \blindtext
18 \end{frame}
19 \end{document}
20
```

## Output

Long Title

Long Author Name/Speaker Name

January 30, 2018

Frame Title

Frame Subtitle

Lore ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lore ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis uma dictum turpis accumsan semper.

**Note:** For getting Stockton theme style file and sample latex file visit:  
[http://www1.pacific.edu/~smerz/Pacific\\_Beamer\\_Theme.html](http://www1.pacific.edu/~smerz/Pacific_Beamer_Theme.html)

# Using Themes

## Warsaw Theme

Long Title

Long Author Name/Speaker Name

January 30, 2018

Short Author Name/Speaker Name short slide



## Berlin Theme

Long Title

Long Author Name/Speaker Name

January 30, 2018

Short Author Name/Speaker Name short slide



# Themes - Color Themes

Specifies the color themes of the slide template either complete or just for inner and outer elements:

Color Themes (many are named after animals):

- **complete:** albatross, beetle, crane, dove, fly, seagull, wolverine, beaver
- **inner:** lily, orchid, rose
- **outer:** whale, seahorse, dolphin

**Note:** Theme-Matrix presents various theme and color combinations:

<http://www.hartwork.org/beamer-theme-matrix/>

# Colored Boxes

```
\begin{frame}
\frametitle{Colored Boxes}
\orangebox{Theorem Orange}{If you use the orangebox
command, the box will be orange.}
\end{frame}
```

## Theorem Orange

If you use the orangebox command, the box will be orange.

# Colored Boxes

Theorem Orange.

If you use the orangebox command, the box will be orange.

Theorem Green.

If you use the greenbox command, the box will be green.

Theorem Blue.

If you use the bluebox command, the box will be blue.

Theorem Gray.

If you use the graybox command, the box will be gray.

Theorem Grass Green.

If you use the grassgreen box command, the box will be grass green.

# Colored Bullets

```
\begin{itemize}
\item These are the ordinary
\item bullets produced
\item by the usual
\item itemize command
\end{itemize}
\begin{orangeitemize}
\item \{orangeitemize\}
\item produces flat
\item orange bullets
\end{orangeitemize}
\begin{grassgreenitemize}
\item \{grassgreenitemize\}
\item produces
\item grass green bullets
\end{grassgreenitemize}
```

- These are the ordinary
- bullets produced
- by the usual
- itemize command
- {orangeitemize}
- produces flat
- orange bullets
- {grassgreenitemize}
- produces
- grass green bullets

# Match Bullets to Box

## Match Your Bullets

- Don't forget to match
- your bullets to the box
- they live in.

## Orange Box

- orangeitemize
- produces
- orange bullets.

# Environments - Lists

## Itemize - environment

```
\begin{itemize}  
\item first item  
 \item second item  
\end{itemize}
```

- first item
- second item

## Enumerate - environment

```
\begin{enumerate}  
 \item first item  
 \item second item  
\end{enumerate}
```

- ❶ first item
- ❷ second item

## Description - environment

```
\begin{description}  
 \item[Item1] description  
 \item[Item2] description  
\end{description}
```

Item1 description  
Item2 description

# Overlays - Pause

## Pause command

An easy way to create overlays is the \pause command. If you use this command somewhere in the frame, only the text on the frame up to the \pause command is shown on the first slide. On the second slide, everything up to the second \pause, and so forth.

- ① Shown from first slide on.

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- ② Shown from second slide on.
- ③ Shown from third slide on.

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- ④ Shown from fourth slide on.

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- ① Shown from first slide on.
- ② Shown from second slide on.
- ③ Shown from third slide on.
- ④ Shown from fourth slide on.

```
\begin{enumerate}
\item Shown from first slide on.
\pause
\item Shown from second slide on.
\pause
\item Shown from third slide on.
\pause
\item Shown from fourth slide on.
\end{enumerate}
```

⇒ Can be used inside environments, mathematical equation & texts.

# Overlays - Specifications

- Overlays specifications are given in pointed brackets <...> which can be written behind certain commands.
- These specifications indicate which slide the corresponding information should appear on, as explained in the following:
- < 2 > → display on slide 2.
- < 1 – > → display from slide 1 on.
- < 1 – 3 > → display from slide 1 to slide 3.
- < – 3, 5 – 6, 8 – > → display on all slides except slides 4 and 7.
- Shown from first slide on.

```
\begin{itemize}
\item<1-> Shown from first slide on.
\item<2-> Shown from second slide on.
\item<4> Shown only in forth slide.
\item<3,5-> Shown in 3., 5. and all
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\end{itemize}
```

# Overlays Specifications - Example

## Input Tex

```
\alert{Alert on all slides.}\\\alert<2>{Alert on slide 2}\\\alert<3>{Alert on slide 3}\\\alert<1,3>{Alert on slides 1 and 3}\\\alert<-2,4>{Alert on slides 1,2 and 4}\\
```

## Output

Alert on all slides.  
Alert on slide 2  
Alert on slide 3  
Alert on slides 1 and 3  
Alert on slides 1,2 and 4

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## Output

Alert on all slides.  
Alert on slide 2  
Alert on slide 3  
Alert on slides 1 and 3  
Alert on slides 1,2 and 4

# Including Graphics

- Standard  $\text{\LaTeX}$  figure environment can be used
- $\rightarrow \backslash\text{includegraphics}[\text{options}]\{\text{filename}\}$

Options are:

- $\text{scale}=<\text{value}>$ : scale the picture by  $<\text{value}>$
- $\text{height}=<\text{len}>$ : scale the picture so that the width is  $<\text{len}>$
- $\text{width}=<\text{len}>$ : scale the picture so that the width is  $<\text{len}>$
- $\text{angle}=<\text{x}>$ : rotate the picture by  $<\text{x}>$  degrees
- $\text{draft}$ : Don't display image, print filename in a box of the same size.

# Including Graphics



# Including Graphics



`scale=0.15`

# Including Graphics



`height=1.5in`

# Including Graphics



`width=3in`

# Including Graphics



height=2.5in,width=3.5in

# Including Graphics



angle=90,height=2.5in,width=3.5in

# Including Graphics

figs/sample1.jpg

**draft,height=2.5in,width=3.5in**

# Including Graphics

## Subfigures

```
\begin{figure}
  \centering
  \begin{subfigure}[b]{0.3\textwidth}
    \includegraphics[width=\textwidth,height=1in]{figs/animal1}
    \caption{A Zebra}
    \label{fig:Zebra}
  \end{subfigure}
  \begin{subfigure}[b]{0.3\textwidth}
    \includegraphics[width=\textwidth,height=1in]{figs/animal2}
    \caption{A Cat}
    \label{fig:cat}
  \end{subfigure}
  \begin{subfigure}[b]{0.3\textwidth}
    \includegraphics[width=\textwidth,height=1in]{figs/animal3}
    \caption{A Tiger}
    \label{fig:tiger}
  \end{subfigure}
  \caption{Pictures of animals}\label{fig:animals}
\end{figure}
```

# Including Graphics

## Subfigures



(a) A Zebra



(b) A Cat



(c) A Tiger

**Figure:** Pictures of animals

# Using columns

```
\begin{columns}
\begin{column}{.5\textwidth}
\begin{block}{Block 1}
Block 1 text
\end{block}
\end{column}
\begin{column}{.5\textwidth}
\includegraphics[height=1in]{figs/sample1}
\end{column}
\end{columns}
```

Block 1

Block 1 text



# Using minipage

```
\begin{minipage}{.5\textwidth}
\includegraphics[height=1.in]{figs/sample1}
\end{minipage}
\hfill
\begin{minipage}{.45\textwidth}
sample text sample text sample text
sample text sample text sample text
\end{minipage}
```



sample text sample text sample  
text sample text sample text  
sample text

# Alignments & Spacings

- A frame can be assigned a left, center, or right alignment with the `flushleft`, `center` and `flushright` environments

```
\begin{center}  
The center aligned text goes here.  
\end{center}
```

## Centre aligned Example

The center aligned text goes here.

- A vertical or horizontal space can be indicated by using `\vspace{0.5cm}` and `\hspace{0.5cm}`, respectively.
- Several units can be used, e.g, mm, cm, in, pt, ...
- Also negative values can be used to squeeze text or graphics together: `\vspace{-0.5cm}`

# Table Creation: Examples

```
\begin{tabular}{l|c|r}
\hline
label 1 & label 2 & label 3 \\
\hline\hline
cell 1 & cell 2 & cell 3 \\
cell 4 & cell 5 & cell 6 \\
\hline
\end{tabular}
```

label 1	label 2	label 3
cell 1	cell 2	cell 3
cell 4	cell 5	cell 6

# Table Creation: Examples

For more professional looking tables use the booktabs package: E.g.  
it provides the commands \toprule, \midrule & \bottomrule.

```
\begin{tabular}{c|c|c}
\toprule
label 1 & label 2 & label 3 \\
\midrule
cell 1 & cell 2 & cell 3 \\
cell 4 & cell 5 & cell 6 \\
\bottomrule
\end{tabular}
```

label 1	label 2	label 3
cell 1	cell 2	cell 3
cell 4	cell 5	cell 6

# References

-  Beamer Class:  
<http://sourceforge.net/projects/latex-beamer/>
-  Beamer User Guide:  
<http://ctan.imsc.res.in/macros/latex/contrib/beamer/doc/beameruserguide.pdf>
-  L<sup>A</sup>T<sub>E</sub>X - beamer Course:  
[http://impact.byu.edu/computation\\_seminar/latex/beamer-script.pdf](http://impact.byu.edu/computation_seminar/latex/beamer-script.pdf)
-  For more model L<sup>A</sup>T<sub>E</sub>X Files and Ebooks:  
<https://bduportal.wordpress.com/latex/>

Thank  
you!!

[www.idaravinthan.info](http://www.idaravinthan.info)