



Research Group in Computational Linguistics



# Beamer: Presentations and Posters in L<sup>A</sup>T<sub>E</sub>X

Digital Skills for Research

*Day 2, part 3*  
*University of Malaga*

11 May 2022

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References

Reflect on your progress and see whether you:

### Commands for 'article'

1. know some default environments in article class (e.g. minipage)
2. can distinguish commands and environments;
3. can tell optional/mandatory arguments apart;
4. know which units are used to set width/height;
5. can lose all borders and lines in a table;
6. can generate a list of tables/figures/code listings

### Cross-refs and templates

1. can cross-reference table, figures, examples, pages;
2. can define and use custom tints and shades of colours;
3. understand how new commands/environments are defined;
4. can recognise class and style files as parts of a Latex template;
5. can enumerate Examples with respect to Chapters;
6. can quote parts of Python code in your document.

## If stuck, don't despair:

1. Recompile several times - changes in the structure apply after the second compilation sometimes.
2. Delete temporary files and recompile (see how in Overleaf).
3. The best way to learn is to engage with existing source code.
4. There is always an answer online: check documentation (right-click on package import) and forums.
  - ▶ asking the right question can be a trick, e.g. (from a forum)  
*If it were me, I'd search for `\setbeamertemplate*`. It might use the term starred. Almost certainly won't call it an asterisk.*
  - ▶ selecting the best (and safe) solution can be difficult
5. Use a template!
6. If you don't use it, you will lose it

# BEAMER is a class to produce slides

from The User [guide](#) [Tantau2022] (to good presentations)

- ▶ Start with an inventory of what you can reasonably talk about.
- ▶ Do not use more than four sections<sup>1</sup>.
- ▶ The frametitle should really explain things, not just give a cryptic summary to be decyphered during talk.
- ▶ Titles on consecutive frames should “tell a story” all by themselves.
- ▶ Too little text is better than too much text (20-40 words, max 80, per frame).
- ▶ Never put more than five items in an itemize or an enumerate.
- ▶ Use `\alert` to highlight important things.
- ▶ Use phrases, not sentences.

---

<sup>1</sup>A lot of respect to anyone who can delete References from the header in this code

## BEAMER

is a  $\text{\LaTeX}$  class for creating presentations

### Compatibility with other classes:

many packages are shared: it is easy to transfer tables from the paper/report to the slides

- ▶ e.g. tabular, minipage, bibliography, graphics, equations

Some **macros do not work** and/or have alternative solutions, e.g.

- ▶ **verbatim** → only with [fragile] frame parameter
- ▶ **tcolorbox** → **block** environment
- ▶ **minipage** or **multicol** → **columns** environment with `\column{.5\textwidth}` command to start a column

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References

# Beamer is a document class; it produces PDF slides

## Main feature: Overlays

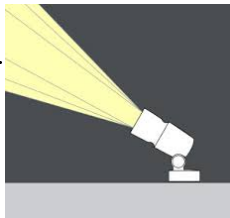
```
\documentclass[11pt,handout]{beamer}
```

## Main element: Frames

```
\begin{document}
```

```
\begin{frame}{Frame title}
  The body of the frame.
\end{frame}
```

```
\end{document}
```





## Choose your layout and color

See [Beamer theme gallery](#)

► General themes:

default	CambridgeUS	Singapore
Antibes	Berkeley	Copenhagen
Madrid	Berlin	Malmoe
Montpellier	Ilmenau	Warsaw

► Color themes:

beetle, beaver, orchid, whale, dolphin, rose

► Inner themes (bullets styles and colored areas shape): circles, rectangles, rounded, inmargin (e.g. `useinnertheme=rounded`)

► Outer themes: infolines, smoothbars, sidebar, split, tree

This presentation uses:

<code>\usetheme{Montpellier}</code>	<code>\useinnertheme{default}</code>
<code>\usecolortheme{rose}</code>	<code>\useoutertheme{smoothbars}</code>

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References

## Handout and Overlays

1. Save a pdf in the **handout mode**  
(e.g. ku\_sess5\_talk.pdf and ku\_sess5\_handout.pdf):  
`\documentclass[11pt,handout]{beamer}`

# Handout and Overlays

1. Save a pdf in the **handout mode**  
(e.g. `ku_sess5_talk.pdf` and `ku_sess5_handout.pdf`):  
`\documentclass[11pt,handout]{beamer}`
2. Show the content incrementally:
  - ▶ `\pause` anywhere in a frame (**recommended!**)

# Handout and Overlays

1. Save a pdf in the **handout mode**  
(e.g. `ku_sess5_talk.pdf` and `ku_sess5_handout.pdf`):  
`\documentclass[11pt,handout]{beamer}`
2. Show the content incrementally:
  - ▶ `\pause` anywhere in a frame (**recommended!**)
  - ▶ overlay specification with `<2>`, `<0-3>`, `<3->`  
`\begin{enumerate}`  
`\item<2-> My numbered item to appear on overlay 2`  
`\item<3->`  
`\end{enumerate}`
  - ▶ advanced commands for handling overlays:  
`\only<overlay specification>{text}`  
`\uncover<overlay specification>{text}`

# Handout and Overlays

1. Save a pdf in the **handout mode**  
(e.g. ku\_sess5\_talk.pdf and ku\_sess5\_handout.pdf):  
`\documentclass[11pt,handout]{beamer}`
2. Show the content incrementally:
  - ▶ `\pause` anywhere in a frame (**recommended!**)
  - ▶ overlay specification with `<2>`, `<0-3>`, `<3->`  
`\begin{enumerate}`  
`\item<2-> My numbered item to appear on overlay 2`  
`\item<3->`  
`\end{enumerate}`
  - ▶ advanced commands for handling overlays:  
`\only<overlay specification>{text}`  
`\uncover<overlay specification>{text}`

**NB!** the alternating content in the same frame space will not appear in handout!

## Where are we? How much longer?

NB! The handout mode skips the Outline slides!

```
\AtBeginSection[]  
  {  
    \begin{frame}{Contents}  
    \tableofcontents[currentsection]  
    \end{frame}  
  }
```

Hide navigation symbols and Page numbering

```
\setbeamertemplate{navigation symbols}{}  
\setbeamertemplate{footline}[frame number]
```

# On the shoulders of giants

Simple and clear references adapted to slides (no linebreaks in refs):

```
\usepackage{apalike} or
      \usepackage[super]{natbib} + \citep{citation key}
      (for superscripted intext citations)
+
\setbeamertemplate{bibliography entry note}{}
\setbeamertemplate{bibliography entry location}{}
\setbeamertemplate{bibliography entry title}{}

+
      (after \begin{document})

\begin{frame}[allowframebreaks]{References}
\nocite{*}
\bibliographystyle{apalike}
\bibliography{7_NLP-tasks-complexity}
\end{frame}
```



## And more

1. Shrink text in a frame (DONT):  
`\begin{frame}[shrink=1,plain]{Title}`
2. Use any verbatim environment:  
`\begin{frame}[fragile]{And more}`
3. `\begin{columns}`  
`\column[c]{.5\textwidth}`  
`\end{columns}`
4. `\hspace` and `\hspace*`: The \*-form just insists that the space appear, while the non-\*-form allows the space to be dropped in some cases, such as at the start of a line.

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References

# One-page docs: A0-A4 I

## 1. document class and main package

```
\documentclass{beamer}  
\usepackage[size=a3,orientation=portrait,scale=2.3]  
{beamerposter}
```

## 2. layout (size of header-footer, etc) and color scheme (primary, secondary palette)

```
\usetheme{MAK-flyer}  
\usecolortheme{ComingClean}
```

## 3. main body

```
\begin{document}  
\begin{frame}[fragile]  
...  
\end{frame}  
\end{document}
```

# One-page docs: A0-A4 II

## 4. adjust the fontsize on the title slide

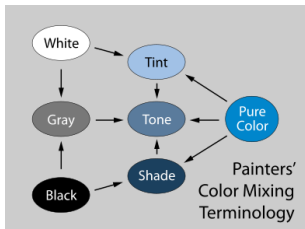
```
\setbeamerfont{title}{size=\LARGE\normalfont}
```

## 5. grey background to print slides on paper (why print?):

```
\mode<handout>{\beamertemplatesolidbackgroundcolor{black!5}}
```

## 6. defining a named color:

```
\definecolor{ForestGreen}{RGB}{0,150,100}
```



## Examples of my posters

styled portrait A1

default landscape

### ► Beamer Button!

```
\href{URL}{\beamerbutton{text}}
```

## Adapt a .sty to produce a recognizable style

### Naming conventions:

beamerthemeLLT-poster.sty → beamerthemeMAK-poster.sty

```
\usetheme{LLT-poster}
```

beamercolorthemeConspicuousCreep.sty

```
\usecolortheme{ConspicuousCreep}
```

### Use your own parameters for any elements of a template

- ▶ headline/footline
- ▶ lower separation line head
- ▶ fonts, distances, width of lines

### Examples of definitions

```
\setbeamercolor{structure}{fg=HazySummerEve}
\setbeamercolor{palette primary}{fg=black,bg=WinterSkin}
\setbeamercolor{foot}{bg=HazySummerEve!80,fg=white}
\setbeamercolor{enumerate item}{fg=Zen}
```

# Absolute positioning on page/frame and more on boxes

## Positioning

1. activate `eso-pic` in preamble to get the grid
2. create a `textblock` env with `{width}` and `(x,y)` coordinates
3. add contents, see e.g. →

## Frames around content

- ▶ `\begin{equation*}`
- ▶ a `minipage` env with width argument `{13em}` inside a `\fbox{}`
- ▶ a plethora of other options

## EXAMPLES:

$$H = \frac{1}{2} (-\omega_m + \delta\lambda(x) \cos 2\theta_m) \sigma_3 - \frac{\delta\lambda(x)}{2} \sin \theta_m \sigma_1$$

I am framed some multi-line text  
framed with **minipage** environment  
and the frame width is 15em

# Gentle introduction to referencing

## Bibliography Management

- ▶ LaTeX has built-in support for citing references (`\begin{thebibliography}{99}`)
- ▶ It is more convenient to store bibliography records externally (in `.bib` files, containing dictionary-like records for publications)
- ▶ There are two major formats for, and tools to process, these databases: (older) BibTeX and BibLaTeX.
- ▶ BibTeX and BibLaTeX expect different keys in these dictionaries (`year={2020}` vs `date={2020}`). They are automatically mutually convertible<sup>2</sup>.
- ▶ This workshop uses BibTeX.

---

<sup>2</sup>See Tharindu's solution

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References



## Task 2-5. Make a presentation about one of your hobbies

Produce slides presenting your favourite pastime (maybe a book you read last). Try to use the following:

- ▶ a title slide with two logos
- ▶ ToC and progress before each section
- ▶ columns
- ▶ pictures
- ▶ alerted text
- ▶ overlays and incremental material presentation
- ▶ list environments
- ▶ boxes
- ▶ navigation symbols (at least the slides counter)
- ▶ references

Do you think you have time to develop your own unique presentation style file that would make all your talks stand out?

# Outline

Key concepts and commands covered

Beamer themes: layout and colour

Useful slides-specific commands

Producing posters and own .sty

Task 2-5

ToC-only References

# Embedded bibliography



Akmajian & Lehrer A. 1976. NP-like quantifiers and the problem of determining the head of an NP. *Linguistic Analysis* 2, 295–313.



Huddleston, Rodney. 1984. *Introduction to the Grammar of English*. Cambridge: Cambridge University Press.

# Bibliography (everything from file) I

(from an external database)