Beamer: Presentations and Posters in LaTeX

Digital Skills for Research

Day 2, part 3
University of Malaga

11 May 2022

Outline

Reflect on your progress and see whether you:

Session 3

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

Session 4

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 [10] (to good presentations)

- Start with an inventory of what you can reasonably talk about.
- Do not use more than four sections[1].
- 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.

[1] A lot of respect to anyone who can delete References from the header in this code

BEAMER

is a 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

Beamer is a document class; it produces PDF slides

Main feature: Overlays

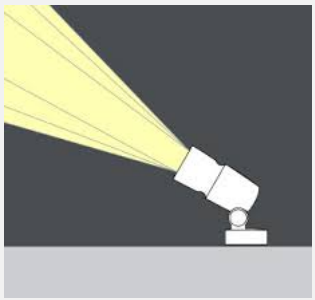
```
\documentclass[11pt,handout]{beamer}
```

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:

```
\usetheme{Montpellier}          \useinnertheme{default}
\usecolortheme{rose}            \useoutertheme{smoothbars}
```

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.
   ```

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

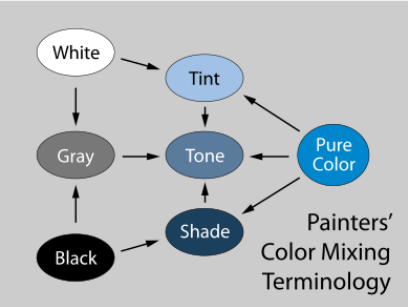
```
\setbeamerfont{title}{size=\LARGE\normalfont}
```

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:

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

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[2].
- This workshop uses BibTeX.

[2] See Tharindu's solution

Task 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?

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)

- Sweta Agrawal and Marine Carpuat. "Controlling Text Complexity in Neural Machine Translation". In: Proceedings of the 2019 Conference on Empirical Methods in Natural Langua Hong Kong, China: Association for Computational Linguistics, 2019, pp. 1549–1564. arXiv: 1911.00835v1. URL: https://newsela.com/data/..

Bibliography (everything from file) II

Fernando Alva-Manchego, Carolina Scarton, and Lucia Specia. "The (Un)Suitability of Automatic Evaluation Metrics for Text Simplification under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) license". In: Association for Computational Linguistics 47.4 (2021), pp. 862–889. DOI: 10.1162/COLI. URL: https://doi.org/10.1162/COLI.

Bibliography (everything from file) III

Fernando Alva-Manchego et al. "ASSET: A Dataset for Tuning and Evaluation of Sentence Simplification Models with Multiple Rewriting Transformations". In: Proceedings ofthe 58th Annual Meeting ofthe Association for Computational Association for Computational Linguistics, 2020, pp. 4668–4679. URL: https://github.com/facebookresearch/.

Fernando Alva-Manchego et al. "Learning How to Simplify From Explicit Labeling of Complex-Simplified Text Pairs". In: Proceedings ofthe The 8th International Joint Conference on Natural Languag Taipei, Taiwan: AFNLP, 2017, pp. 295–305. URL: https://github.com/jbingel/.

Bibliography (everything from file) IV


Alessia Battisti et al. "A Corpus for Automatic Readability Assessment and Text Simplification of German". In: Proceedings ofthe 12th Conference on Language Resources and Evaluation. Marseille: European Language Resources Association (ELRA), 2020, pp. 11–16. arXiv: 1909.09067v1. URL: https://www.pdflib.com/.


Pavel Efimov, Leonid Boytsov, and Pavel Braslavski. "SberQuAD - Russian Reading Comprehension Dataset: Description and Analysis". In: CoRR abs/1912.09723 (2019). URL: http://arxiv.org/abs/1912.09723.

Bibliography (everything from file) V


Siyou Liu and Xiaojun Zhang. "Corpora for Document-Level Neural Machine Translation". In: Proceedings of the 12th Conference on Language Resources and Evaluation. 2020, pp. 3775–3781. URL: http://opus.nlpl.eu/OpenSubtitles2018..


Carolina Scarton and Lucia Specia. "Learning Simplifications for Specific Target Audiences". In: Proceedings ofthe 56th Annual Meeting ofthe Association for Computational Melbourne: Association for Computational Linguistics, 2018, pp. 712–718. URL: http://opennmt.net/OpenNMT/.


Kazuki Tani et al. "A Benchmark Dataset for Multi-Level Complexity-Controllable Machine Translation". In: LREC 2022 submission. 2022.

Bibliography (everything from file) VI

 Till Tantau. User's Guide to the Beamer Class, Version 3.66. 2022.