

# A first RPTU L<sup>A</sup>T<sub>E</sub>X Presentation

## A more detailed example

---

with the new RPTU Kaiserslautern-Landau Corporate Design

Dr. Max Mustermann  
AG Statistik, FB Mathematik

Kaiserslautern, March 3, 2023



# Agenda

---

## 1. Theme Options

## 2. Elements of a Frame

- › Blocks
- › Footnotes
- › Frame Styles
- › Lists

## 3. Math

## 4. Images and Figures

1

## **Theme Options**

## Available options I – Colors and RPTU Hausschrift (Red Hat Text)

`\usetheme[options]{rptu}`

Option	Description
<code>dunkelblau hellblau rot orange dunkelgruen hellgruen blaugrau gruengrau violett pink</code>	Set color scheme of presentation ( <b>dunkelblau</b> is default) Each line defines a colorscheme, you specify the main color and the secondary color is set automatically
<code>redhattext=true false</code>	Use/ <b>Do not use</b> the Red Hat Text Font needs specific compilers $\Rightarrow$ read remarks (Slide 5)

Defaults are the descriptions written in **bold**.

## Using Red Hat Text

- › Make sure that the static versions of the font are installed on your computer
- › We use the following .ttf files
  - › RedHatText-Regular as normal text
  - › RedHatText-Italic as *italic* `\textit`
  - › RedHatText-SemiBold as **bold** `\textbf`
  - › RedHatText-SemiBoldItalic for ***bold and italic***
  - › RedHatText-Bold for **title and the sectionpage**, can be accessed with `\fontseries{k}\selectfont`
- › We use the package `fontspec` for setting this font  $\Rightarrow$  you need to compile with  $\text{Xe}\text{L}\text{A}\text{T}\text{E}\text{X}$  (XeLaTeX) or  $\text{Lua}\text{L}\text{A}\text{T}\text{E}\text{X}$  (LuaLaTeX) if you want to use Red Hat Text
- › If you use  $\text{Xe}\text{L}\text{A}\text{T}\text{E}\text{X}$  or  $\text{Lua}\text{L}\text{A}\text{T}\text{E}\text{X}$  with the option `redhattext=false` then Arial is set as main font family with Arial Black as substitute for **RedHatText-Bold** (you need to install Arial/Arial Black manually under Ubuntu in that case)
- › With pdfLaTeX the main font family is Computer Modern ( $\text{L}\text{A}\text{T}\text{E}\text{X}$  default)

## Available options II - Logos

`\usetheme[options]{rptu}`

Option	Description
<code>ownlogo=true false</code>	Use/ <b>Do not use</b> a user specified logo (instead of default RPTU logo)
<code>sponsorlogo=true false</code>	Use/ <b>Do not use</b> a user specified sponsor logo (placed in upper right corner)

Defaults are the descriptions written in **bold**.

In both cases you need to specify the exact image with dimensions by filling

> `\renewcommand\ownlogo{}`  $\Rightarrow$  image A on the title page

> `\renewcommand\sponsorlogo{}`  $\Rightarrow$  image B on the title page

with e.g. `\includegraphics[width=3cm]{your_file.png}`

## Available options III - Footline

`\usetheme[options]{rptu}`

Option	Description
<code>institute=true false</code>	Show/ <b>Hide</b> short institute in footnote
<code>displayinstitute</code>	Show short institute in footnote
<code>hideinstitute</code>	Hide short institute in footnote
<code>frametotal=true false</code>	Show/ <b>Hide</b> total number of slides in footnote
<code>displayframetotal</code>	Show total number of slide in footnote
<code>hideframetotal</code>	Hide total number of slide in footnote

Defaults are the descriptions written in **bold**.

This version uses the option `displayframetotal` but the default regarding the institute in the footnote.

## Available options IV - Navigation

`\usetheme[options]{rptu}`

Option	Description
<code>navigation=true false</code>	Show/ <b>Hide</b> navigation in headline
<code>displaynavigation</code>	Show navigation in headline
<code>hidenavigation</code>	Hide navigation in headline
<code>compress</code>	equivalent to beamer's compress

Defaults are the descriptions written in **bold**. If you do not specify any navigation option, no navigation bar with mini frames will be shown.

This presentation uses the defaults, i.e. no navigation bar.



# Options

## Some Remarks

---

- › Use `navigation=true` in combination with the option `compress` to obtain a single line for the navigation symbols.
- › If `institute=true` the `\institute` is used to set the name of department/institute/affiliation both in the footline and on the title page  
`\institute[name in footline]{name on title page}`
- › Use `\documentclass[aspectratio=169]{beamer}` for getting a 16:9 aspect ratio instead of 4:3

# 2

## **Elements of a Frame** **Blocks**

## Basic Block

`block`: Content is typeset like this

## Alert Block

`alertblock` (always in rot/orange): Content is typeset like this

## Example Block

`exampleblock` (always in dunkelgruen/hellgruen): Content is typeset like this

## Definition (Probability Space)

A definition goes here.

## Theorem (Bayes' Theorem)

*We might want to state theorems.*

## Example

Or give examples.

## Proof.

And a proof. □

These boxes are created with the `tcolorbox` package and are defined within `beamerthemeRPTU.sty`.

```
\begin{rptu-twocolors}  
text  
\end{rptu-twocolors}
```

```
\begin{rptu-onecolor}  
text  
\end{rptu-onecolor}
```

# 2

## **Elements of a Frame** Footnotes

Sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Sed diam voluptua.<sup>1</sup> At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

---

<sup>1</sup> here goes a footnote

# Footnotes

What happens with mutiple footnotes?

---

Sed diam voluptua. At vero eos et accusam et justo duo dolores<sup>2</sup> et ea rebum.  
Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.  
Sed diam voluptua.<sup>3</sup> At vero eos et accusam et justo duo dolores et ea rebum.  
Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit  
amet.<sup>4</sup>

---

<sup>2</sup>some footnote

<sup>3</sup>here goes a footnote

<sup>4</sup>even a third footnote



# 2

## **Elements of a Frame** **Frame Styles**

## A slide of style minimal

---

You can create a slide like this via

```
\begin{frame}[minimal]{A slide of style minimal}
```

```
...
```

```
\end{frame}
```

Here, only frame number and RPTU logo are shown in the footline.

## A slide of style **minimal** and **highlight1**

---

```
\begin{frame}[minimal]{A slide of style minimal, highlight1}  
...  
\end{frame}
```

Here, only frame number and RPTU logo are shown in the footline. **Highlight1** sets the background color to the main color.

- > A
  - > A
  - > B
- > B

## A slide of style **highlight2**

---

```
\begin{frame}[highlight2]{A slide of style highlight2}  
...  
\end{frame}
```

**Highlight2** sets the background color to the secondary color.

## A slide of style **plain**

---

```
\begin{frame}[plain]{A slide of plain}  
...  
\end{frame}
```

An example for a **plain** slide with title, thus no footline, no headline, no navigation  
(in case that you use the navigation option)

## If you want a monochrome slide

---

```
\begin{frame}[minimal, black]{If you want a monochrome slide}  
...  
\end{frame}
```

This one uses `minimal` and `black`

## Back to a white slide

---

Style changes are only changed back to default at the beginning of each standard slide. `\rptusectionpage` does not count as a slide. You should use a non-colored slide before using a sectionpage with a subsection title (as e.g. the next slide) to correctly change the colors. Using minimal or plain is fine.

# 2

## Elements of a Frame Lists



# Itemize and Enumerate Environments

---

Some text before the itemize

- › one
  - › item one one
  - › item one two
    - › item one one
    - › item one two

› two

Some text after the itemize

Some text before the enumerate

1. one
2. two
  - 2.1. enumerate with subitem
  - 2.2. second
3. and even mixed
  - › item one one
  - › item one two

Some text after the enumerate

# 3

**Math**

## Sample of Math Typesetting

By default, the beamer template changes the math font to the sans serif font.

$$\sum_{n=1}^k \frac{1}{n} \asymp \int_1^{k+1} \frac{1}{x} dx = \ln(k+1) \quad \sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \cdots = \frac{\pi}{4}$$

$$\int_a^b f(x) dx = F(b) - F(a)$$

$$f'(a) = \lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$

$$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ 0 & 3 \end{bmatrix}$$

$$r = |z| = \sqrt{x^2 + y^2}$$

If you want to use a different sans serif or a serif font, you can use

```
\usepackage{unicode-math}
\setmathfont{Latin Modern Math}
```

in the preamble to specify Latin Modern Math (as a serif font) or any other available font as math font.

# 4

## **Images and Figures**

with `\subsection*` it is possible to add some text here which does not count for the table of contents

## Include Images

on black background

---

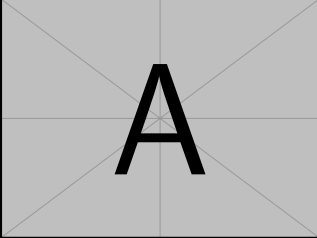


Figure: Image A

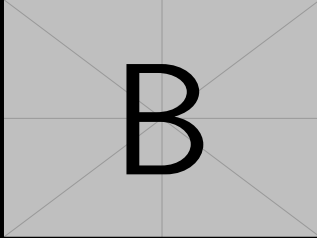


Figure: Image B

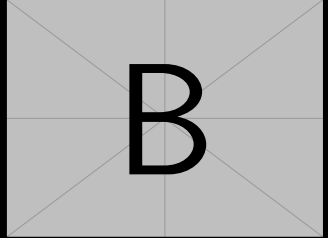


Figure: Image C

## Include Images

on white background

---

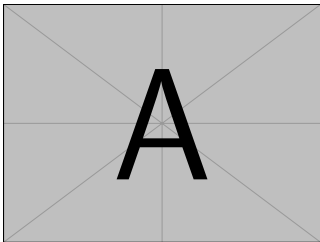


Figure: Image A

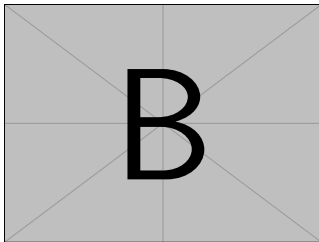


Figure: Image B

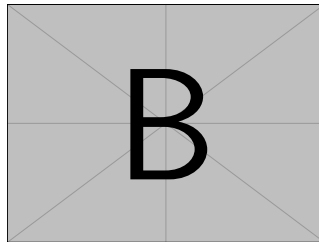


Figure: Image C