



# **L<sup>A</sup>T<sub>E</sub>X BEAMER TEMPLATE**

## **Howto for beamer-Slides v18.06**

June 20, 2018 | Template Version 18.05 | Tutorial Version 18.06 | My Institute

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# Part I: Introduction

# L<sup>A</sup>T<sub>E</sub>X STY. FILES – VERSION 18.06

- first version with new corporate design
- tutorial is not complete yet, will be updated periodically



## Part II: Installation

# BEAMERTHEME-JUELICH.ZIP

The .zip archive consists of 1 directory with 2 subdirectories.

- beamertheme-juelich.zip
- beamertheme-juelich/
  - /
    - fzj.pdf
    - beamerthemeJuelich.sty
    - beamerouterthemeJuelich.sty
    - beamerinnerthemeJuelich.sty
    - beamerfontthemeJuelich.sty
    - beamercolorthemeJuelich.sty
  - tutorial/
  - tutorial/

main directory of the .zip file  
directory containing the .sty files

Juelich logo for pdf $\LaTeX$   
main style file  
aux. style file  
aux. style file  
aux. style file

directory containing a minimal examples

directory containing the sources to this tutorial

# LINUX INSTALLATION

## Choose `texmf` Tree

First, choose your favorite install directory.

Then, create a new subdirectory `beamertheme-juelich`

## Change to your `texmf` tree and create subdirectory

- `cd $HOME/texmf/tex/latex/` [preferred] or
- `cd /usr/share/texmf/tex/latex/` or
- `cd /usr/local/share/texmf/tex/latex/`
  
- `mkdir beamertheme-juelich`

# LINUX: INSTALL THE .STY FILES

## Create Directory + Copy files + Update T<sub>E</sub>X

- Unzip `beamertheme-juelich.zip` file
- Copy all files from subdirectory `beamertheme-juelich/` into the new subdirectory `beamertheme-juelich`
  
- Try to compile the minimal examples in the `tutorial/` subdirectory  
`pdflatex minimal.tex`  
`pdflatex minimal_handout.tex`
- Afterwards try to compile this tutorial in the `tutorial/` subdirectory  
`pdflatex tutorial.tex`

## Supported flavors of L<sup>A</sup>T<sub>E</sub>X

Pure latex is not supported, please use either `pdflatex`, `xelatex` or `lualatex`

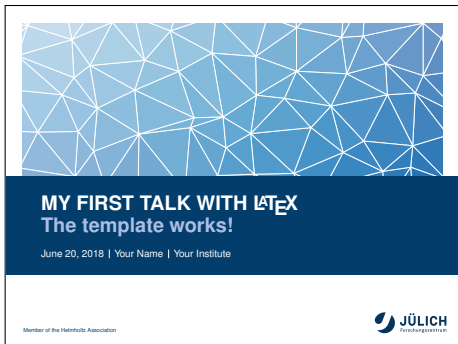


# TEST YOUR INSTALLATION

Try to compile this minimal talk

```
\documentclass{beamer}
\usetheme{Juelich}

\title{My first talk with \LaTeX{}}
\subtitle{The template works!}
\author{Your Name}
\institute{Your Institute}
\date{\today}
\titlegraphic{\includegraphics%
[width=\paperwidth]{placeholder}
}
\begin{document}
\maketitle
\end{document}
```



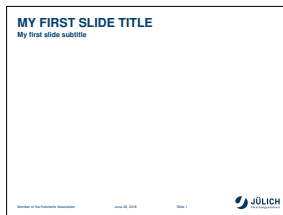
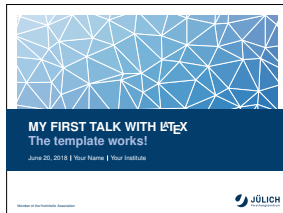
# TEST YOUR INSTALLATION II

Try to compile this minimal talk with handouts

```
\documentclass[t,handout]{beamer}
\usetheme{Juelich}

\title{My first talk with \LaTeX{}}
\subtitle{The template works!}
\author{Your Name}
\institute{Your Institute}
\date{\today}
\titlegraphic{\includegraphics%
[width=paperwidth]{placeholder}
}
\begin{document}
\maketitle

\begin{frame}
\frametitle{My first slide title}
\framesubtitle{My first slide subtitle}
\end{frame}
\end{document}
```





## Part III: Examples

# L<sup>A</sup>T<sub>E</sub>X-BEAMER FEATURES

The following slides show how `Latex-Beamer` constructs work within the template.

- Framebreaks
- Lists, numbered lists
- Plain slides, background images
- Theorems, proofs
- Definitions, examples
- Blocks, alert blocks
- Highlight options
- Formulae
- Verbatim environments

# LOTS OF LISTS

## Another Subtitle

- using the pause command:
  - First item.

# LOTS OF LISTS

## Another Subtitle

- using the `pause` command:
  - First item.
  - Second item.
- using overlay specifications:
  
- using the general `uncover` command:

# LOTS OF LISTS

## Another Subtitle

- using the `pause` command:
  - First item.
  - Second item.
- using overlay specifications:
  - 1** First numbered item.
  
- using the general `uncover` command:

# LOTS OF LISTS

## Another Subtitle

- using the `pause` command:
  - First item.
  - Second item.
- using overlay specifications:
  - 1** First numbered item.
  - 2** Second numbered item.
    - 3rd level item!
- using the general `uncover` command:



# LOTS OF LISTS

## Another Subtitle

- using the `pause` command:
  - First item.
  - Second item.
- using overlay specifications:
  - 1** First numbered item.
  - 2** Second numbered item.
    - 3rd level item!
- using the general `uncover` command:
  - First item.

# LOTS OF LISTS

## Another Subtitle

- using the `pause` command:
  - First item.
  - Second item.
- using overlay specifications:
  - 1** First numbered item.
  - 2** Second numbered item.
    - 3rd level item!
- using the general `uncover` command:
  - First item.
  - Second item.

# PLAIN FRAMES

- The next slide shows a plain frame, even without the “Jülich” color bars at the left-hand side.
- To use plain frames add the `[plain]` parameter to your `\begin{frame}` statement.

## How to use plain frames

```
\begin{frame}[plain]
\frametitle{Plain Frame}
\begin{center}
  Here is my tiny text on a plain frame.
\end{center}
\end{frame}
```

# PLAIN FRAME

Enough space for your **big ideas.** (or holiday pictures)

# BLOCK CONSTRUCTS

theorem, proof

## Theorem

*There is no largest prime number.*

## Proof.

1 Suppose  $p$  were the largest prime number.

4 Thus  $q + 1$  is also prime and greater than  $p$ . □

# BLOCK CONSTRUCTS

theorem, proof

## Theorem

*There is no largest prime number.*

## Proof.

- 1 Suppose  $p$  were the largest prime number.
- 2 Let  $q$  be the product of the first  $p$  numbers.
- 3
- 4 Thus  $q + 1$  is also prime and greater than  $p$ . □

# BLOCK CONSTRUCTS

theorem, proof

## Theorem

*There is no largest prime number.*

## Proof.

- 1 Suppose  $p$  were the largest prime number.
- 2 Let  $q$  be the product of the first  $p$  numbers.
- 3 Then  $q + 1$  is not divisible by any of them.
- 4 Thus  $q + 1$  is also prime and greater than  $p$ .



# BLOCK CONSTRUCTS

definition, example

## Definition

A **prime number** is a number that has exactly two divisors.

## Example

- 2 is prime (two divisors: 1 and 2).
- 3 is prime (two divisors: 1 and 3).
- 4 is not prime (**three** divisors: 1, 2, and 4).



# BLOCK CONSTRUCTS

block, alertblock

## Simple Block

Just some text.

## Alert Block

This block seems to be pretty important.

# HIGHLIGHT IMPORTANT INFORMATION

Use “Jülich” colors to attract attention

Use `\emph{}`

This text is `\emph{important}`.

This text is **important**.

Use `\alert{}`

This text is `\alert{really}` important!

This text is **really** important!

# MATH ENVIRONMENT

Use your  $\LaTeX$  formulae inside your slides without hassle

$$\iiint_V \operatorname{div} \vec{F} dV = \iint_S \vec{F} \cdot d\vec{S}$$

$$\prod_{k=1}^n k = n!, \quad \sum_{k=1}^n k = \frac{n(n+1)}{2}, \quad \int_0^{2\pi} \sin t dt = 0$$

$$p(x) = \sum_{i=0}^n f_i q_i(x) \quad \text{with} \quad q_i(x) = \prod_{\substack{k=0 \\ k \neq i}}^n \frac{x - x_k}{x_i - x_k}.$$

$$\iint_S (U \operatorname{grad} W) \cdot d\vec{S} = \iiint_V (\operatorname{grad} U \cdot \operatorname{grad} W + U \Delta W) dV$$

# VERBATIM ENVIRONMENT

## Code Snippets

- Slides containing `\verb` statements must be defined `fragile`

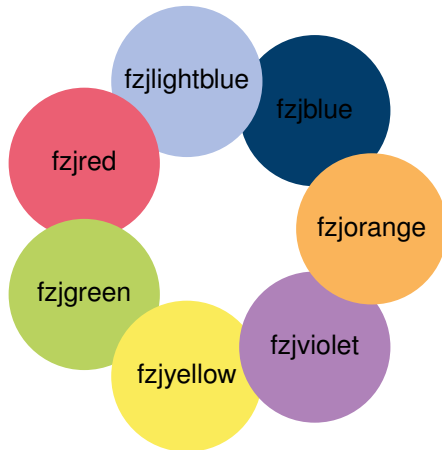
```
\begin{frame}[fragile]
  \frametitle{Hello World in Intercal}
  \begin{verbatim}
    DO ,1 <- #13
    PLEASE DO ,1 SUB #1 <- #234
    DO ,1 SUB #2 <- #112
    DO ,1 SUB #3 <- #112
    DO ,1 SUB #4 <- #0
    DO ,1 SUB #5 <- #64
    DO ,1 SUB #6 <- #194
    DO ,1 SUB #7 <- #48
    PLEASE DO ,1 SUB #8 <- #22
    DO ,1 SUB #9 <- #248
    DO ,1 SUB #10 <- #168
    DO ,1 SUB #11 <- #24
    DO ,1 SUB #12 <- #16
    DO ,1 SUB #13 <- #214
    PLEASE READ OUT ,1
    PLEASE GIVE UP
  \end{verbatim}
  % remove X after copy & paste :-)
```



## Part IV: Jülich Colors

# CORPORATE COLORS

You can use predefined colornames to spice up your slides





# Part V: Localization

# LOCALIZATION

## How to change the date display to another language

The date will be adjusted automatically. You just have to use the `babel` package with the desired language.

### Date style – Mixed

load package with DE and EN (default):

choose German:

choose English:

```
\usepackage[ngerman,english]{babel}
```

```
\selectlanguage{ngerman}
```

```
\selectlanguage{english}
```

### Date style – German

01. Januar 2018

```
\selectlanguage{ngerman}
```

### Date style – English

January 01, 2018

```
\selectlanguage{english}
```



# LOCALIZATION/LANGUAGE

## Change Helmholtz Banner Text

Using the `babel` package with the `language` option automatically sets the correct labels for the slide counter and Helmholtz banner.

## Helmholtz Banner and Date in German

- Take a look at the date and Helmholtz banner in the lower left corner and the slide name and frame number in the middle
- This slide should show the german version
- Enable options via `\documentclass[english,ngerman]{beamer}`
- Enabled locally via `\selectlanguage{ngerman}` before `\begin{frame}`

# Part VI: Tweaks

# SLIDE NUMBER DISPLAY

## How to change the slide number style

### Full Display: Current Slide — Overall Number of Slides

```
\setbeamertemplate{frame number}[full]
```

Slide 42 | 524

### No Display: empty

```
\setbeamertemplate{frame number}[empty]
```

### Default Display: Current Slide

```
\setbeamertemplate{frame number}[default]
```

Slide 42

### Translation

If you choose german as language the name **Slide** will be translated to **Folie** automatically (See [this](#) slide)

# PROJECT PARTNERS

## How to set up partner logos

- Show up to 3 partner logos, on this slide Jara, RWTH, Bonn
- Design your logos with sufficiently large white borders
- pdf<sup>L</sup>A<sup>T</sup>E<sup>X</sup> pictures file types: .pdf .png .jpg

## Show logos

```
\setbeamertemplate{footer element1}[logo]{jara}  
\setbeamertemplate{footer element2}[logo]{uni_bonn}  
\setbeamertemplate{footer element3}[logo]{rwth}
```

## Reset back to default settings

```
\setbeamertemplate{footer element1}[default]  
\setbeamertemplate{footer element1}[default]  
\setbeamertemplate{footer element1}[default]
```



# Part VII: Handouts

# CREATE HANDOUTS

## Switch and Setup Render Mode

```
\documentclass[handout]{beamer}  
\mode<handout>{  
\pgfpagesuselayout{4 on 1}[a4paper,landscape,border shrink=5mm]}
```

## Define Number of Pages per Sheet

```
\pgfpagesuselayout{2 on 1}[a4paper,border shrink=5mm]  
\pgfpagesuselayout{4 on 1}[a4paper,landscape,border shrink=5mm, landscape]  
\pgfpagesuselayout{8 on 1}[a4paper,border shrink=5mm]  
\pgfpagesuselayout{16 on 1}[a4paper,landscape,border shrink=5mm, landscape]
```

## Further Reading – See `Latex-Beamer` manual for details

[www.ctan.org/tex-archive/macros/latex/contrib/beamer/doc/beameruserguide.pdf](http://www.ctan.org/tex-archive/macros/latex/contrib/beamer/doc/beameruserguide.pdf)

# ASPECT RATIO

The documentclass allows several ratios for the slide. Just change the variable `aspectratio`.

- `aspectratio=43` gives classical 4:3 ratio
- `aspectratio=169` gives classical 16:9 ratio
- `aspectratio=1610` gives classical 16:10 ratio

# STYLE

The design allows two styles.

## Style with Image

- for the title page: `\fzjset{title page=image}`
- for the part page: `\fzjset{section page=image}`
- for the section page: `\fzjset{section page=image}`

## Style with Text

- for the title page: `\fzjset{title page=text}`
- for the part page: `\fzjset{section page=text}`
- for the section page: `\fzjset{section page=text}`



# ALLCAPS OR REGULAR TITLE FONTS

It is possible to switch the style of the font via the options

- `\fzjset{title=allcaps}` to set the title in allcaps
- `\fzjset{title=regular}` to set the title regular
- `\fzjset{subtitle=allcaps}` to set the title in allcaps for short text
- `\fzjset{subtitle=regular}` to set the title regular and in a smaller font for long text
- `\fzjset{part=allcaps}` to set the part in allcaps for short text
- `\fzjset{part=regular}` to set the part regular and in a smaller font for long text
- `\fzjset{frametitle=allcaps}` to set the frametitle in allcaps for short text
- `\fzjset{frametitle=regular}` to set the frametitle regular and in a smaller font for long text

# L<sup>A</sup>T<sub>E</sub>X Beamer Template

## Now in text only mode and regular text

June 20, 2018 | Your Name | My Institute



# **L<sup>A</sup>T<sub>E</sub>X Beamer Template** **Now back in image mode**

June 20, 2018 | Your Name | My Institute

# Part X: This is a part page

**This is a part page**

**This is a section page**

# TITLE IN ALLCAPS

# Title in a regular style

# Fixed Bugs

## Periodically

The .zip archive will be updated periodically for bug fixes. The name and URL of the archive will be the same.

## More Pitfalls/bugs?

Please report.



# Part XI: Extensions

# Poster with L<sup>A</sup>T<sub>E</sub>X-Beamer

To create scientific posters with L<sup>A</sup>T<sub>E</sub>X the beamerposter extension can be used. Template will be provided soon.

More Information at

<http://www-i6.informatik.rwth-aachen.de/~dreuw/latexbeamerposter.php>

# Contact

Thank you for using this template!

## Enhance Missing Functionality Yourself!

Please send your enhancements along with a short description to [i.kabadshow@fz-juelich.de](mailto:i.kabadshow@fz-juelich.de)

## Report Problems

Please report problems with the template or uncommon behavior to [i.kabadshow@fz-juelich.de](mailto:i.kabadshow@fz-juelich.de)