



Stéphane Galland

Documentation of the **CIAD** Theme for Beamer

Version 2026/09/07

- This document explains the $\text{\LaTeX}$ commands that are provided by the CIAD theme for beamer.

- To use the CIAD theme for beamer, you must:
 - 1 Install the files of the CIAD theme inside your $\text{\LaTeX}$ distribution.
 - 2 Create a document, which uses the document class: `ciadbeamer`

- Provide a presentation style related to the research group of the CIAD laboratory located at the UTBM and UBE.
- Add a title slide (with label `titleslide` for `\hyperlink`) as the first slide.
- Add a final slide at the end of the presentation to avoid “black” screen at the end of the presentation.
- Provide high level commands for building the slides.

It is recommended to read the user guide of Beamer for obtain a view of the available commands.

```
http://texdoc.net/texmf-dist/doc/  
latex/beamer/doc/beameruserguide.pdf
```

- 1 Predefined Values
- 2 Class Options and Document Declaration
- 3 Header and Footer Tuning
- 4 Background Picture
- 5 Sectionning
- 6 Special Slides
- 7 Slide Content
- 8 Slide Transitions

- 1 Predefined Values
 - Colors
 - Styles
- 2 Class Options and Document Declaration
- 3 Header and Footer Tuning
- 4 Background Picture
- 5 Sectionning
- 6 Special Slides
- 7 Slide Content

- The CIAD theme defines the colors for the commands provided by the `xcolor` package:

- CIADblue : Example Example
- CIADmagenta : Example Example
- CIADgreen : Example Example
- CIADdarkgreen : Example Example
- CIADlightgreen : Example Example
- CIADlightestgreen : Example Example
- CIADdarkmagenta : Example Example
- CIADlightmagenta : Example Example
- CIADlightestmagenta : Example Example

- The CIAD theme defines the colors for the commands provided by the `xcolor` package:

- CIADdarkgray : Example Example
- CIADlightgray : Example Example
- CIADlightestgray : Example Example

- The CIAD theme defines color for beamer, that may be used with the command `\usebeamercolor{color_name}`:

- code keyword : Example

- code string : Example

- code comment : Example

- The CIAD theme defines the specific templates for Beamer. These templates could be used with `\usebeamertemplate{name}`:
 - `code basic style` : the style for the standard text in a program or an algorithm.
 - `code inline style` : the style for the standard text in a program or an algorithm when it is displayed inline.
 - `code identifier style` : the style for the identifiers in a program or an algorithm.
 - `code keyword style` : the style for the keywords in a program or an algorithm.

- 1 Predefined Values
- 2 Class Options and Document Declaration
 - Class Options
 - Title, Subtitle and Front Page
 - Authors
 - Title Page for PhD Oral Defense
 - Title Page for Conference Presentation
 - Keywords, Subject and Abstract
 - Name of the Event
 - Name and URL of the Institute
- 3 Header and Footer Tuning
- 4 Background Picture
- 5 Sectionning

The document class ciadbeamer supports the following options.

Presentation language

- `english`: the slides are written in English (this is the default).
- `french`: the slides are written in French.

Automatic slides

- `oraldefense`: Use the "Oral Defense" front page instead of the regular title page.
- `conferencepresentation`: Use the "Conference Presentation" front page instead of the regular title page.
- `nocover`: do not add a slide for the title and the "thanks".
- `thanksslide`: add a slide with the word "Thanks" at the end (this is the default).
- `questionslide`: add a slide with the word "Question" at the end.
- `repeattitleslide`: add the title slide at the end.

Slide numbering

- `textnumberstyle`: the frame numbers are output as text.
- `circlenumberstyle`: the frame numbers are output in a circle.
- `sectioncirclenumberstyle`: the frame numbers are output in a circle.
- `partcirclenumberstyle`: similar to `circlenumberstyle` except that the indicator is reset at the start of each part.
- `partsectioncirclenumberstyle`: similar to `sectioncirclenumberstyle` except that the indicator is reset at the start of each part.
- `nonumberstyle`: the frame numbers are not output.

Example

► See example

Footline and Headline

- `lablogo` and `no lablogo`: enable or disable the logos of the main institutions (lab, universities, etc.) in the foot line.
- `utbmlogo` and `noutbmlogo`: enable or disable the logo of "Université de Technologie de Belfort-Montbéliard" in the foot line.
- `ubelogo` and `nobelogo`: enable or disable the logo of "Université de Bourgogne" in the foot line.
- `carnotlogo` and `nocarnotlogo`: enable or disable the logo of "Institut Carnot ARTS" in the foot line.
- `frenchrepublic` and `nofrenchrepublic`: enable or disable the logo of the French Republic in the head line.

Hyphenation

- `hyphenation` and `nohyphenation`: enable or disable the hyphenation of the text on the slides.

Handout — Free space beside slides for hand notes

- `handout` and `nohandout`: enable or disable the generation of the handout document.

Bibliography — DOIs or regular labels

- `doiinbib`: the labels of the bibliography references are DOI if defined, otherwise the regular bibliography label is used (see `nodoiinbib` option).
- `nodoiinbib`: the labels of the bibliography references are based on the names and year of publication, e.g., [Galland, 2025].

Fancy Title Page

- `titlefancyletters` and `notitlefancyletters`: enable or disable the fancy rendering of the first letters of the words with a specific color into the title frame.
- `allfancyletters`: If the previous option is true, all the letters are colored. Otherwise only the upper case letters are colored.
- `fancyframetitle` and `nofancyframetitle`: enable or disable the rendering of the first group of words and the second group in the frame's title.

All the options accepted by Beamer are also accepted.

Title

Use the command: `\title{title of the document}`

Subtitle

Use the command: `\subtitle{subtitle of the document}`

These commands must be put in the preamble of your document.

The title page contains a background divided into several parts:



- 1 the title of the slides
- 2 a picture on the right that could be changed (e.g. the CIAD logo)
- 3 a background picture that could be changed (e.g. the black background)
- 4 a picture on the left that could be changed (e.g. the hands)

For changing the picture on the right ②, use the command:

```
\setttitlepagerightfigure(x,y){pgf-id}
```

- (x, y) is the coordinate where to put the picture.
- pgf-id is the identifier of the picture that is declared with the command `\declarepgfimage[size]{pgf-id}{filename}` before calling the command `\setttitlepagerightfigure`.

Example

```
\pgfdeclareimage[width=5cm]{mypicture}{ciad-utbmlogo}  
\setttitlepagerightfigure(250,-30){mypicture}
```



For changing the picture on the left ④, use the command:

```
\settitlepageleftfigure(x,y){pgf-id}
```

- (x, y) is the coordinate where to put the picture.
- pgf-id is the identifier of the picture that is declared with the command `\declarepgfimage[size]{pgf-id}{filename}` before calling the command `\settitlepageleftfigure`.

Example

```
\pgfdeclareimage[width=5cm]{mypicture}{ciad-utbmlogo}  
\settitlepageleftfigure(0,-30){mypicture}
```



For changing the picture on the left background ③, use the command:

```
\settitlepageuserbackground{pgf-id}
```

- pgf-id is the identifier of the picture that is declared with the command
`\declarepgfimage[size]{pgf-id}{filename}` before calling the command
`\settitlepageuserbackground`.

The left picture is automatically removed when the command above is invoked

Example

```
\pgfdeclareimage[height=\paperheight]{mypicture}{mybackground}  
\settitlepageuserbackground{mypicture}
```

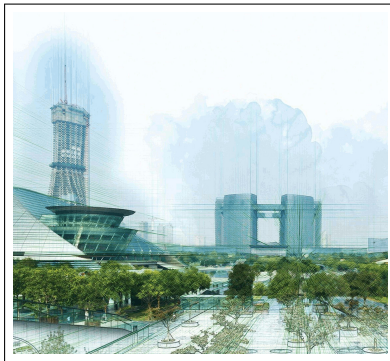


Several background pictures are provided into the CIAD Beamer theme for the position ③. In order to select one of these background, the command below must be used. The list of predefined background is provided in the following slides.

`\setpredefinedtitlepagebackground#`

- # is the number of the predefined background, e.g., "1"

\setpredefinedtitlepagebackground1



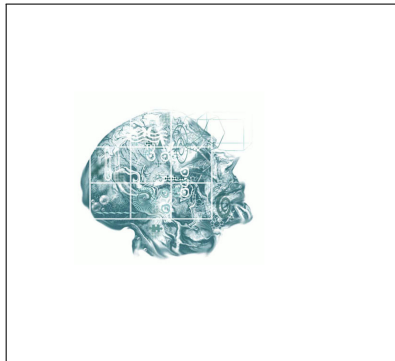
`\setpredefinedtitlepagebackground2`

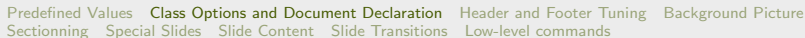


`\setpredefinedtitlepagebackground3`



\setpredefinedtitlepagebackground4





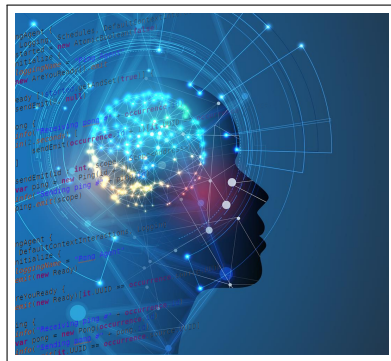
\setpredefinedtitlepagebackground6



`\setpredefinedtitlepagebackground7`



\setpredefinedtitlepagebackground8



\setpredefinedtitlepagebackground9



For restoring the title page to its default state, the following commands are available:

- `\setdefaulttitlepageleftfigure`: restore the left picture ② to the default CIAD logo
- `\removetitlepageleftfigure`: remove any picture at position ②
- `\removetitlepageuserbackground` remove the user background ③ and restore the default background

- Authors are defined with the command:
`\author[short]{long}`
 - the `long` list of author is displayed on the front page. You should separate the names with the command `\and`.
 - the `short` list of author is displayed inside the foot line of the slides. You **must not separate** the names with the command `\and`.
- **Alternatively**, you could define the authors with the commands:
`\addauthor[short]{long}`
`\addauthor*[short]{long}`
 - Add **one** author to the list of the authors.
 - The “starred” version applies some visual indicators to the name (underline, etc.) It may be used to indicate the name of the talker for example.

These commands must be put in the preamble of your document.

- Authors may be described with additional information (affiliation...):
`\authordescription{description}`

This command must be put in the preamble of your document.

- It is possible to change the regular title page by a title page dedicated to **PhD or Master oral defense**.
- For enabling the page, use the class option "oraldefense".
- The configuration of the content of this special front page is explained in the following slides

From Artificial Intelligence to Multiagent systems

Prof.Dr. Stéphane GALLAND
 May 30, 2025 at Belfort, France

Members of the Committee:		
E F	PU à l'UTBM	President
Stéphane GALLAND	PU à l'UTBM	Examiner
Nicolas GAUD	PU à l'UTBM	Reviewer
C D	PU à l'UTBM	Examiner
A B	PU à l'UTBM	Examiner
C D	PU à l'UTBM	Invitée
G I	PU à l'UTBM	Examiner

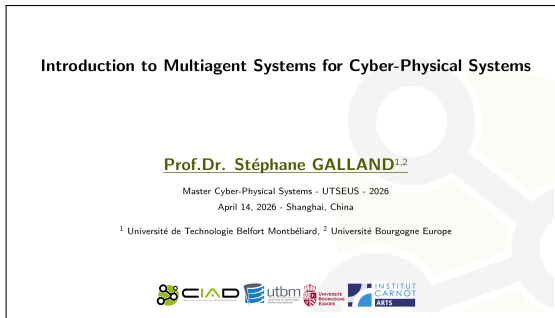


- Setting the title and the author is explained in the other sections
- `\date{<text>}` changes the defense date
- `\place{<text>}` changes the defense place/location
- `\adddefenselogo{<image path>}` adds a logo at the bottom of the page
- `\resetdefenselogo` removes all the logo from the front page
- `\resetdefenselogotodefault` removes all the logo from the front page but keep the CIAD laboratory logos
- `\setdefensebackground(<x>,<y>){<background index>}` changes the background figure. Index is the number of the background image as defined for the regular slides. x and y are the coordinates of the images on the front page

The members of the oral defense committee could be set with the following command

- `\addcommittee[options]{<name>}{<position>}` adds a member in the committee with the given name and position
- Options are:
 - `female` specifies that the member is a woman
 - `male` specifies that the member is a man (default)
 - `president` specifies that the member is president of the committee
 - `reviewer` specifies that the member is reviewer of the work
 - `examiner` specifies the default role in the committee
 - `director` specifies that the member is the director of the candidate
 - `codirector` specifies that the member is the codirector of the candidate
 - `supervisor` specifies that the member is a supervisor of the candidate
 - `invitee` specifies that the member is invited in the committee

- It is possible to change the regular title page by a title page dedicated to **Conference Presentations**.
- For enabling the page, use the class option "conferencepresentation".
- The configuration of the content of this special front page is explained in the following slides



- Setting the title, the authors and the event is explained in the other sections
- `\affil{<id>}{<name>}` add an affiliation with the given identifier
- `\affil{<id>}` show affiliation identifier, usually on the side of the author names
- `\resetaffiliations` reset the list of affiliations
- `\date{<text>}` changes the conference presentation
- `\place{<text>}` changes the place/location of the conference
- `\addpresentationlogo{<image path>}` adds a logo at the bottom of the page
- `\resetpresentationlogo` removes all the logo from the front page
- `\resetpresentationlogotodefault` removes all the logo from the front page but keep the CIAD laboratory logos
- `\setpresentationbackground(<x>,<y>){<background index>}` changes the background figure. Index is the number of the background image as defined for the regular slides. x and y are the coordinates of the images on the front page

- You could associate keywords to the document with:
`\keywords{text}`
- These keywords are automatically put in the properties of the generated PDF file.
- To insert the keywords into your slides, you could use the command:
`\insertkeywords`

Example

Beamer; Theme; CIAD; UTBM; UBE; Documentation

- You could associate a subject to the document with:
`\subject{text}`
- This subject is automatically put in the properties of the generated PDF file.
- To insert the subject into your slides, you could use the command:
`\insertsubject`

Example

Beamer Theme for CIAD Laboratory

- You could put a short summary of the document in the following environment:

```
\begin{abstract}
This is a summary.
\end{abstract}
```

Abstract

This is a summary.

- If you include an abstract, be sure that it is not some long text but just a very short message.

Definition of the event name

- You could specify the name of the event for which the slides are written:
`\event[short]{full}`
- the `full` name is displayed on the front page.
- the `short` name is displayed inside the foot line of the slides.
- Put these commands into the document preamble.

Insert the event name in your slides

- You could insert the full name of the event with:
`\inserteventname`
- You could insert the short name of the event with:
`\insertshorteventname`

- You could change the name of the institute with the following command in the document preamble:
`\institute[short]{full}`
- the `full` name is displayed on the front page.
- the `short` name is displayed inside the foot line of the slides.
- The default full name is:
Laboratoire Connaissance et Intelligence Artificielle Distribuées
 Univ. Bourgogne-Franche-Comté, France - www.ciad-lab.fr
- The default short name is: CIAD

- You could change the URL of the institute with:
`\instituteurl{url}`
- The default url is: `www.ciad-lab.fr`
- To insert the institute's URL, you could use the command:
`\insertinstituteurl`

2 Class Options and Document Declaration

3 Header and Footer Tuning

- Headline
- Footline
- Partner Logo
- Frame Numbering
- Continuation Text

4 Background Picture

5 Sectionning

6 Special Slides

7 Slide Content

- CIAD theme provides an headline in which you can change the logo.

- You could change this headline with:
 - `\useheaderempty`: the headline is empty (no icon).
 - `\useheaderdefault`: the headline is filled with the default value (may be changed with one of the commands on the following slide).

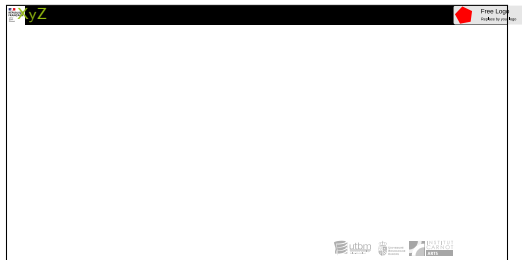
■ \useheaderempty



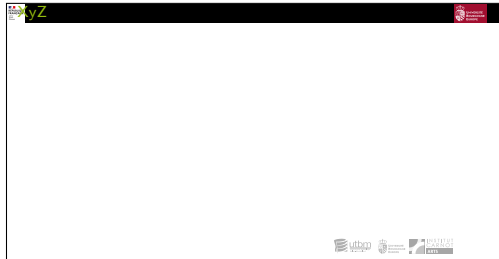
- `\useheaderlinewithciadlogo`: the default headline contains the CIAD logo.



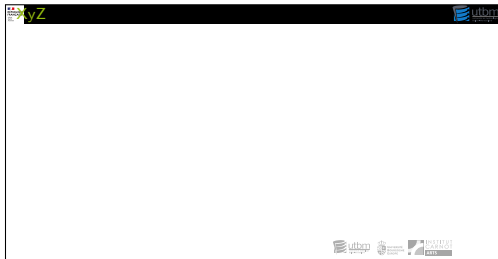
- `\useheaderlinewithutbmlogo`: the default headline contains the UTBM logo.



- `\useheaderlinewithubelogo`: the default headline contains the UBE logo.



- `\useheaderlinewithuserlogo[options]{filename}`: the default headline contains the given image.
- Options may be:
 - `width=<length>` - the width of the image (default: 1cm);
 - `height=<length>` - the height of the image (no default);
 - `x=<float>` - the position of the image along x axis (default: 415);
 - `y=<float>` - the position of the image along y axis (default: -16).



- By default the title of a slide is rendered with two colors:
 - The green color is used for the first part (as shown for the title of this slide); and
 - The white color is used for the second part.
- By default, only the first word of the title is considered as the first part of the title (colored in green)
- If you would like to change the words in the first part (colored in green), you could enclose them with braces:
- Example:
 - The following slide has the title `This is an example`, and the two first words are colored in white.
 - The title is written as: `{This is} an example`

Show the previous slide for explanation on this example slide.

- Beamer provides a footline in which the progress of the presentation may be shown. In the CIAD theme, this footline is located at the bottom left of the slides.
- You could change this footline with:
 - `\usefootlinefortitlepage`: the footline contains the same footline as on the title page.
 - `\usefootlinewithdocumentname`: the footline contains the title of the presentation, and other document informations.
 - `\usefootlinewithsections`: the footline contains the list of the sections of the presentation.
- The following command is used for inserting the official laboratory logos at the bottom right corner of the slides:


```
\insertinstitutelogosinfootline{commands}
```

 - The parameter is the set of commands to insert between the logos (basically a spacing command).
 - You could redefine this command for changing the logos.

- You could add on all slides one or more logos for your partner(s):
`\partnerlogo[options]{filename}`
- You must call the previous command for each partner logo.
- The `filename` is the name of the picture.
- This figure is declared with `\pgfdeclareimage` with the key “CIADpartnerlogo”.
- The figure could be re-used with `\pgfuseimage`.
- The options are passed to `\pgfdeclareimage`. The default option is `height=.5cm`.
- For removing all the partner logos, use: `\nopartnerllogo`.

- The total number of slides in the core part of the presentation could be obtained with:
`\inserttotalcoreframenum`
- For example, this documentation document has 225 slides.

- The following command changes the style of the frame numbers:
 - `\insertframenumbers[type number]`
 - The type number is the identifier of the progress bar to be used:

Type number	Output	Explanation
1		Show the current frame and its position (in green) in the total number of frames.
2		Show the current frame and the total number of frames.
3		Same as the type 1 with a progression bar for the current section (in magenta).

- When continuing a frame, Beamer insert the “continuation text” after the title.
- To insert the continuation text manually, you should use one of:
 - `\insertcontinuationtext`
 - `\insertcontinuationwith{integer}`
- The parameter is the value of the continuation counter to display.
- **Example:** in the following frame, the command is used in the title `\insertcontinuationtext`.
- **Example:** in the second following frame, the command is used in the title `\insertcontinuationwith{34}`.

The continuation text in the title of this frame is given by the command
`\insertcontinuationtext`.

The continuation text in the title of this frame is given by the command
`\insertcontinuationwith{34}`.

3 Header and Footer Tuning

4 Background Picture

- Predefined Background Pictures
- Add our Background Pictures
- Insert a Background Picture
- Random Background Picture

5 Sectionning

6 Special Slides

7 Slide Content

8 Slide Transitions

The CIAD Beamer style is able to add a picture on the background of the slides (below your text).

The following slides explain how to:

- 1 use one of the pre-defined background pictures
- 2 add your own background picture
- 3 insert a background picture in your text
- 4 select a background picture randomly

- For using a predefined background picture, you could define it for all the slides, or for a specific slide
- For all the slides, you have to the background=XX option to the document class, where XX is the number of the predefined picture
- For a specific slide, you have to pass the background=XX option to the frame, where XX is the number of the predefined picture

```

\documentclass[background=1]{ciadbeamer}

\begin{frame}[background=1]

```



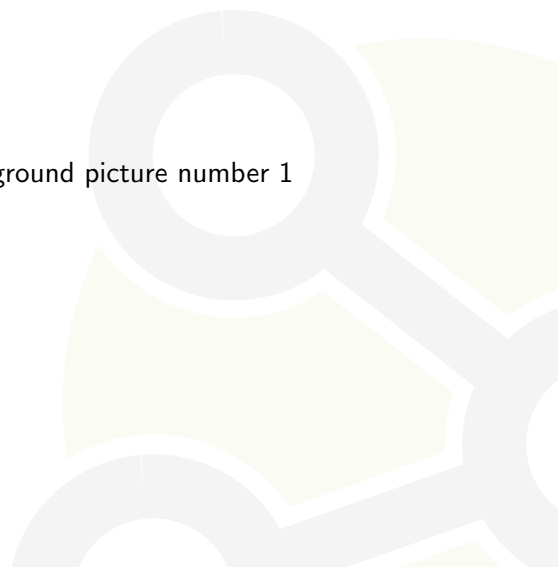
This background picture is candidate for random background

If no picture appears at background, it means that you have not installed the

This slide is an example of the use of the background picture number 1

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**



```

\documentclass[background=2]{ciadbeamer}

\begin{frame}[background=2]

```



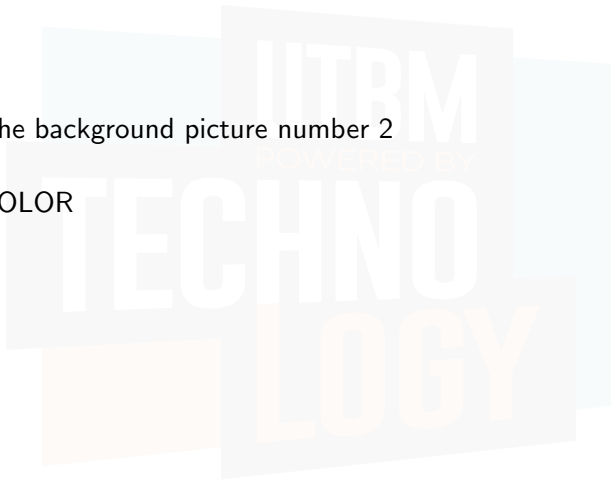
This background picture is candidate for random background

If no picture appears at background, it means that you have not installed the non-free background pictures

This slide is an example of the use of the background picture number 2

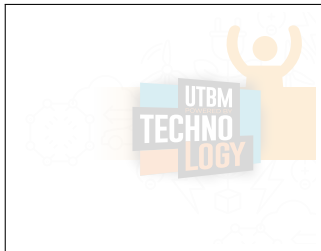
THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**



```
\documentclass[background=3]{ciadbeamer}

\begin{frame}[background=3]
```



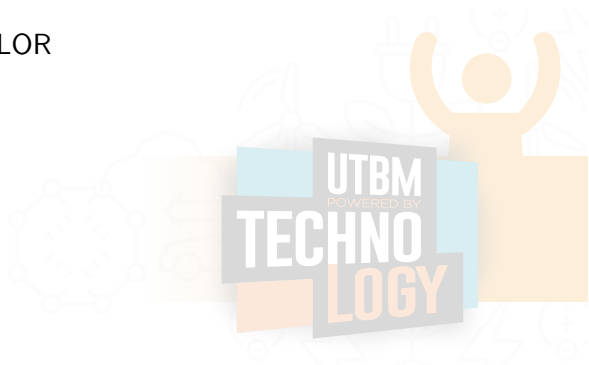
This background picture is candidate for random background

If no picture appears at background, it means that you have not installed the non-free background pictures

This slide is an example of the use of the background picture number 3

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**

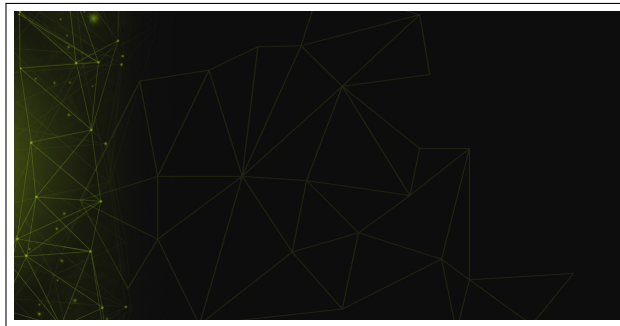


```

\documentclass[background=4]{ciadbeamer}

\begin{frame}[background=4]

```



This background picture cannot be candidate for random background

This slide is an example of the use of the background picture number 4

THIS IS ALTERNATE BACKGROUND COLOR

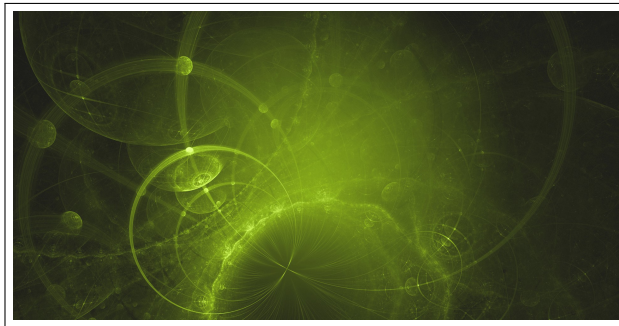
Emphazed **text**

```

\documentclass[background=5]{ciadbeamer}

\begin{frame}[background=5]

```



This background picture cannot be candidate for random background

This slide is an example of the use of the background picture number 5

THIS IS ALTERNATE BACKGROUND COLOR

Emphazed text

```

\documentclass[background=6]{ciadbeamer}

\begin{frame}[background=6]

```



This background picture is candidate for random background

This slide is an example of the use of the background picture number 6

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**

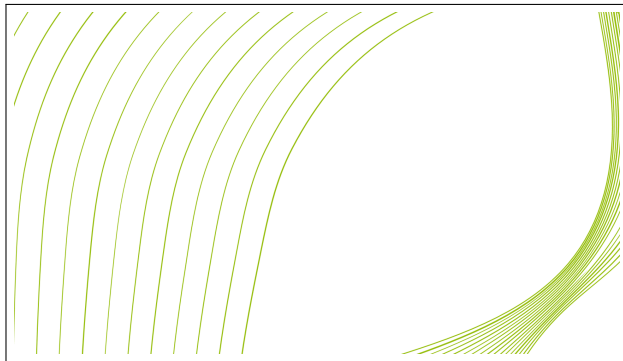


```

\documentclass[background=7]{ciadbeamer}

\begin{frame}[background=7]

```



This background picture is candidate for random background

This slide is an example of the use of the background picture number 7

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**

```

\documentclass[background=8]{ciadbeamer}

\begin{frame}[background=8]

```



This background picture cannot be candidate for random background

This slide is an example of the use of the background picture number 8

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**

```

\documentclass[background=9]{ciadbeamer}

\begin{frame}[background=9]

```



This background picture is candidate for random background

This slide is an example of the use of the background picture number 9

THIS IS REGULAR BACKGROUND COLOR

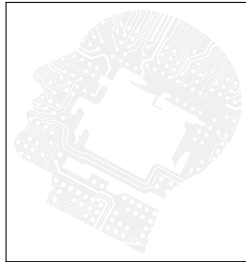
Emphazed **text**

```

\documentclass[background=10]{ciadbeamer}

\begin{frame}[background=10]

```

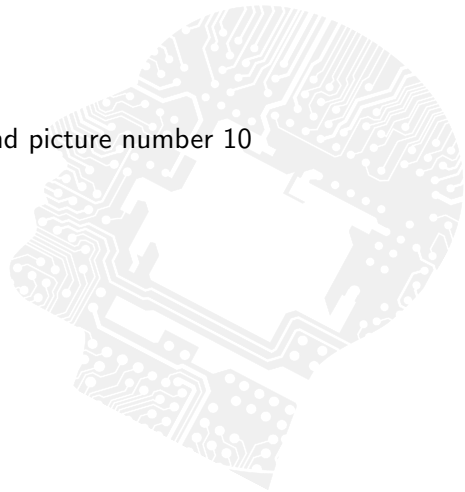


This background picture is candidate for random background

This slide is an example of the use of the background picture number 10

THIS IS REGULAR BACKGROUND COLOR

Emphazed **text**



Two functions are provided for adding our own background picture:

```
\addslidebackgroundpicture[options](x,y){filename}
```

```
\addslidebackgroundpicture*[options](x,y){filename}
```

- (x,y) is the position of the background on the slide
- filename is the filename of the picture
- options is the list of optional parameters in:
 - width=<length> is the width of the picture, by default \linewidth
 - alternatecolor[=<true|false>] is a boolean flag that indicates if the alternate colors should be preferred to regular colors when used with this background. Alternate colors are usually considered to be suitable with dark background pictures
 - outline[=<true|false>] is a boolean flag that indicates if the background is for the outline slides
- The starred version of the command has the effect to register the picture as a candidate for the random selection of the background

The following commands enable you to insert the background picture:

`\insertslidebackgroundpicture{num}`

`\putslidebackgroundpicture{num}`

`\insertcurrentslidebackgroundpicture`

- num is the number of the predefined picture
- `\insertslidebackgroundpicture` is replaced by the picture, using PGF API
- `\putslidebackgroundpicture` places the picture at the expected position in the enclosing Tikz environment
- `\insertcurrentslidebackgroundpicture` places the current picture at the expected position in the enclosing Tikz environment; the current picture depends on the "background" configuration and the random selection of the picture

It is possible to change the background picture random. The candidates are those added with the `\addslidebackgroundpicture*` command

Turning on the random selection of the background is done by specifying the value "randombackground" as class option:

```
\documentclass[randombackground]{ciadbeamer}
```

4 Background Picture

5 Sectionning

- Table of Contents
- Part Sectionning
- Limit sections in TOC
- Appendix
- Bibliography

6 Special Slides

7 Slide Content

8 Slide Transitions

9 Low-level commands

- The CIAD theme provides a convenient command to insert a table of contents into a slide:

```
\tableofcontentsslide[toc options][frame options]
```

- It is equivalent to:

```
\begin{frame}[t,frame options]
\frametitle{\translate{Outline}}
\tableofcontents[toc options]
\end{frame}
```

- In addition to the standard options for `\tableofcontents`, the option `onlyparts` permits to display the list of the parts, only.
- `\outlinetitlelabel` is the default title of the outline slide.

- The CIAD theme provides convenient commands for showing the TOC for sections into a slide:
 - `\sectiontableofcontentslide`
 - `\subsectiontableofcontentslide`
 - `\subsubsectiontableofcontentslide`
- They provide standard show/hide configurations for each section type.
- You could control the list of the sections that are shown in the TOC by specifying a range of section numbers with:
 - `\sectionsintoc{section_range}`

It is equivalent to passing option `sections=section_range` to the `\tableofcontent` command
- The `\sectionsintoc` command is active until it is evaluated again or the following resetting command is used:
 - `\resetsectionsintoc`

- The CIAD theme provides specific implementations of the `\part` command:
 - `\part[options]{title}`
 - `\part*[options]{title}`
- Options may be:
 - a string value that is the “short” title of the part that is appearing in the table of contents.
 - the pair `title=text` to define the “short” title.
 - the pair `subtitle=text` to define the subtitle.
 - the pair `author=text` to define the author of the part.
 - the pair `label=id` to define the label of the part.
- The starred version of `\part` does not add the part in the table of contents.

- By default, each part starts with a slide with only the part's title on, without a prefix such as “Chapter X”.
- The CIAD theme provides the following commands to change the part's prefix:
 - `\insertpartprefix` insert the current part prefix.
 - `\partprefix[counter text]{text}` changes the prefix to “text” followed by “counter text”.
 - `\resetpartprefix` resets the prefix to the empty text.

Example

`\partprefix[\arabic{part}]{Chapter}`
 produces: “Chapter 1”, “Chapter 2”, ...

- Sometimes the number of sections into the TOC is too high for enabling to show all the sections' titles on the slide.
- It is possible to specify a range of section numbers that should appear on the TOC slide. The new optional argument `<range>` of `\section`:
 - `\section<range>[title in toc]{title}`
 - `\section*<range>[title in toc]{title}`
 - `\section<range>*[title in toc]{title}`
- Arguments are:
 - `range`: the range of section numbers to show on the TOC.
 - `title in toc`: the title of the section into the TOC.
 - `title`: the standard title of the section.
- The "starred" commands above ignore the `title in toc` argument and do not add the section into the TOC.

- The CIAD theme supports the appendix part.
- To create the appendix, you must:
 - 1 put the command `\appendix` in your $\text{T}_\text{E}\text{X}$ file; or
 - 2 put the command `\bibliography` in your $\text{T}_\text{E}\text{X}$ file.
- All the slides that are put after the creation of the appendix are assumed to be part of the appendix.
- The slides in the appendix are not considered in the total number of slides for the core part of the document (see `\inserttotalcoreframenum`).
- The slide numbers in the appendix are roman (not arabic), and the page counter is reset at the begining of the appendix.

- You are able to include a bibliography in your slides with the two standard L^AT_EX commands:
`\bibliographystyle{style}`
`\bibliography{filename}`
- If you do not call `\bibliographystyle`, the default style is `apalike`.
- When the command `\bibliography` is used, the appendix section is started if it was not already done.
- The bibliography slides are **always at the end of the document**. Even if you put slides after the `\bibliography` command.
- The first slide of the bibliography is marked with the label “`bibliographyslide`” for `\hyperlink`.

- Bibunits package allows to create separate, individual bibliographies for specific parts
- To use Bibunits, you have to:
`\usepackage{bibunits}`
- The two following elements are automatically activated when you include Bibunits:
 - 1 `\bibliographyslide` create a frame with the bibliography in the current Bibunits section and using the regular Bibunits macro: `\putbib[biblio]`.
 Please note that the name of the BibTeX database is always `biblio.bib`.
 - 2 The following environment permits to create a specific Bibunits block:
`\begin{bibliographysection}`
`...`
`\end{bibliographysection}`
 This environment automatically expands to `\bibliographyslide` at the end of the section block.

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide that is drawn as a “part” frame but **without adding a part section in the document**. This command is usually used for showing the frame outside the context of a `\part` command.
- **L^AT_EX** Command:
`\partframeonly{title}`
- `title` is the title that must be shown on the frame

Example shown on next slide:

```
\partframeonly{This is an example of partframeonly}
```

This is an example of partframeonly

Abstract white wavy lines on a dark background, resembling smoke or flowing liquid, positioned at the bottom of the slide.

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide that contains an additional title on the right, and the standard content is rendered on the left part of slide.
- Definition with the following environment:


```
\begin{righttitleframe}[options]{main title}{right title}
```

Content of the Slide

```
\end{righttitleframe}
```
- options are options to pass to the frame
- main title is the title to be rendered at the top of the frame
- right title is the title to be rendered at the right of the frame

This is the standard frame content. See the previous slide for an explanation.

This is the right title

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide with a regular text area on the left and a picture inside a big green area on the right.
- Definition with the following environment:


```
\begin{textpictureframe}[options]{main title}{pgf-id}
```

Content of the Slide

```
\end{textpictureframe}
```
- options are options to pass to the frame
- main title is the title to be rendered at the top of the frame
- pgf-id is identifier of an image that was declared with the


```
\addtextpicturepicture:
```

```
\addtextpicturepicture{pgf-id}{picture filename}
```

```
\addtextpicturepicture*{pgf-id}{picture filename}
```

no-star version forces the width size of the picture; star version forces the height size of the picture

This is the standard frame content. See the previous slide for an explanation.

```
\addtextpicturepicture{tpexample1}
{ciad-title-background-left9}
\begin{textpictureframe} {Example of frame with left text
and right picture}{tpexample1}
\end{textpictureframe}
```



5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide that a green area (the lawn) on which text is displayed, and a picture is drawn on the right of the lawn.
- Definition with the following environment:


```
\begin{leftlawnframe}[options]{main title}{pgf-id}
```

Content of the Slide

```
\end{leftlawnframe}
```
- options are options to pass to the frame
- main title is the title to be rendered at the top of the frame
- pgf-id is identifier of an image that was declared with the `\addlawnpicture`:


```
\addlawnpicture{pgf-id}{picture filename}
```

`\addlawnpicture*`{pgf-id}{picture filename} no-star version forces the width size of the picture; star version forces the height size of the picture

This is the standard frame content. See the previous slide for an explanation.

```
\addlawnpicture{
lawnexample1}
{ciad-title-background-left9}
\begin{leftlawnframe}
{Example of frame with left
lawn}{lawnexample1}
\end{leftlawnframe}
```



- Slide that a green area (the lawn) on which text is displayed, and a picture is drawn on the left of the lawn.
- Definition with the following environment:


```
\begin{rightlawnframe}[options]{main title}{pgf-id}
Content of the Slide
\end{rightlawnframe}
```
- options are options to pass to the frame
- main title is the title to be rendered at the top of the frame
- pgf-id is identifier of an image that was declared with the `\addlawnpicture`:


```
\addlawnpicture{pgf-id}{picture filename}
\addlawnpicture*{pgf-id}{picture filename}
```

no-star version forces the width size of the picture; star version forces the height size of the picture

This is the standard frame content. See the previous slide for an explanation.

```
\addlawnpicture{
lawnexample1}
{ciad-title-background-left9}
\begin{rightlawnframe}
{Example of frame with
right lawn}{lawnexample1}
\end{rightlawnframe}
```

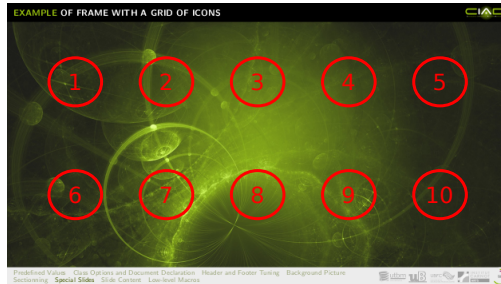
5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide has a grid structure with 10 cells
- Each cell contains an icon and a text



- Definition with the following environment:

$$\begin{array}{l} \backslash\text{begin}\{\text{gridframe}\}[\text{options}]\{\text{main title}\} \\ \text{Cell declarations (see next slide)} \\ \backslash\text{end}\{\text{gridframe}\} \end{array}$$

The declaration of a cell into the icon grid is possible by using one of the two following commands

Declaration of a cell with a picture **loaded by PGF**

```
\cell{cell-number}{pgf-id}{text}
```

Each picture must be declared with the following command in order to be loadable by PGF:

```
\addgridpicture{pgf-id}{picture-filename}
```

Declaration of a cell with a picture **loaded by Graphicx**

```
\cell*{cell-number}{picture-filename}{text}
```



Cell 2



Cell 3



Cell 4



Cell 6



Cell 8



Cell 10



Cell 2



Cell 3



Cell 4



Cell 8



Cell 10



Cell 6

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- The CIAD theme provides a command that permits to display a picture on the entire slide:
`\figureslide[options]{Title of the slide}{file}`
- The size of the picture is adjusted to the slide drawing area.
- Example: `\figureslide{XyZ}{ciad-ciadlogo}`
- If no image appears below, it is because you have not installed the non-free logos



- Options for `\figureslide` are:
 - `width=<length>`, specifies the width of the image.
 - `height=<length>`, specifies the height of the image.
 - `scale=<float>`, specifies the scaling factor of the image.
 - `valign=t|c|b`, specifies the vertical alignment of the image (t: top, c: center, b: bottom).
 - `halign=l|c|r`, specifies the horizontal alignment of the image (l: left, c: center, r: right).
 - `label=<text>`, specifies the label for the frame.
 - `subtitle=<text>`, specifies the subtitle for the frame.



Connaissance et Intelligence **Artificielle** Distribuées

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

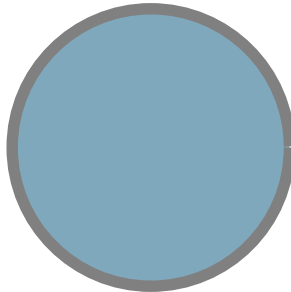
7 Slide Content

You must use the AutoLaTeX¹ tool also included in many T_EX distributions (e.g., T_EXLive.

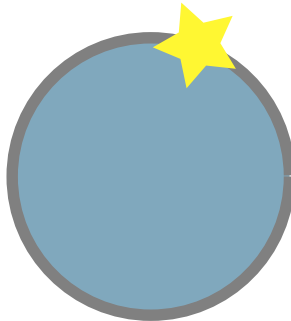
- 1 Open your favorite SVG editor (Inkscape, etc.).
- 2 Create the SVG figure with a layer for each frame.
- 3 Put the frame specification into the names of the layers. The frame specification gives the frame numbers for which the SVG layer is displayed. **Example:** <1-3> indicates the frames 1 to 3. Do not forget to put the lower-than and upper-than symbols.
- 4 Save and run AutoLaTeX. This tool will create a PDF file for each layer, and a T_EX file (.pdf_{tex}_t) that is controlling the displaying of the figure.
- 5 Include the figure with: `\includeanimatedfigure<framespec>[options]{texfilename}` or with `\animatedfigureslide`.

¹<http://www.arakhne.org/autolatex>

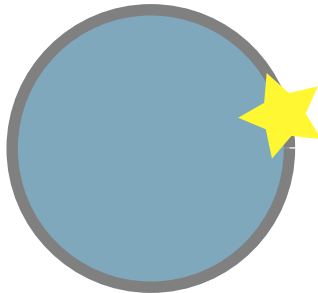
- Content of the figure: Three layers are defined with the following names:
 - Layer1 <1-> — display the circle in all the frames, starting from the first.
 - Layer2 <2> — display the top yellow star in the second frame.
 - Layer3 <3> — display the right yellow star in the third frame.
- Inclusion method: `\input{path-to-figure.pdfTeX_t}`



- Content of the figure: Three layers are defined with the following names:
 - Layer1 <1-> — display the circle in all the frames, starting from the first.
 - Layer2 <2> — display the top yellow star in the second frame.
 - Layer3 <3> — display the right yellow star in the third frame.
- Inclusion method: `\input{path-to-figure.pdf_tex_t}`



- Content of the figure: Three layers are defined with the following names:
 - Layer1 <1-> — display the circle in all the frames, starting from the first.
 - Layer2 <2> — display the top yellow star in the second frame.
 - Layer3 <3> — display the right yellow star in the third frame.
- Inclusion method: `\input{path-to-figure.pdf_tex_t}`



```
\resizebox{.3\linewidth}{!}{
  \resolvepicturename{image-name}
  \input{\resolvedfilename}
}
```

```
\usepackage{autolatex}
```

```
...
```

```
\resolvepicturename{image-name}
```

```
\includeanimatedfigure[width=.3\linewidth]{\resolvedfilename}
```

- The AutoLaTeX² tool provides a $\text{\LaTeX}$ package that enables to include images with layers. Each layers may be displayed in a separate frame by Beamer.
- If you have included the AutoLaTeX package, the following command enables you to display an animated figure on the entire space of a slide:

$$\backslash\text{animatedfigureslide}\langle\text{framespec}\rangle[\text{options}]\{\text{title}\}\{\text{file}\}$$
- This command is similar to $\backslash\text{figureslide}$, except that the given picture must be displayable by the command $\backslash\text{includeanimatedfigure}$, provided by AutoLaTeX.

```
\usepackage{autolatex-beamer}
```

...

```
\animatedfigureslide{Some title}\{image-name\}
```

²<http://www.arakhne.org/autolatex>

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- The CIAD theme provides a command that permits to display a **embedded video** on the entire slide. This video could be displayed during the show with a viewer such as PDFPC:

```
\embeddedvideoslides[options]{Title of the slide}{video
file}{image file}
```

- The size of the picture is adjusted to the slide drawing area.
- Example: `\embeddedvideoslides{XyZ}{myvideo}{ciad-ciadlogo}`
- The given image is displayed if the viewer cannot show up the video.

- Options for `\embeddedvideoslides` are:
 - `width=<length>`, specifies the width of the video.
 - `height=<length>`, specifies the height of the video.
 - `scale=<float>`, specifies the scaling factor of the video.
 - `valign=t|c|b`, specifies the vertical alignment of the video (t: top, c: center, b: bottom).
 - `halign=l|c|r`, specifies the horizontal alignment of the video (l: left, c: center, r: right).
 - `label=<text>`, specifies the label for the frame.
 - `subtitle=<text>`, specifies the subtitle for the frame.

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- Slide with a regular text area on the left, a video inside a big green area on the right and logos below the video.
- Definition with the following environment:

```
\begin{textvideoframe}[options]{main
title}{video-path}{picture-path}
Content of the Slide
\end{textvideoframe}
```
- options are options to pass to the frame
- main title is the title to be rendered at the top of the frame
- video-path is the path to the video
- picture-path is the path to the picture that is rendered in place of the video
- \settextvideofooter{text} permits to set the logo text below the video

This is the standard frame content. See the previous slide for an explanation

```
\settextvideofooter{XYZ}

\begin{textvideoframe}
  {Example of frame[...] }
  {fakevideo.mp4}{examplecftp}
  This is [...]
\end{textvideoframe}
```

Introduction to Multiagent Systems for Cyber-Physical Systems

Prof.Dr. Stéphane GALLAND^{1,2}

Master Cyber-Physical Systems - UTSEUS - 2026

April 14, 2026 - Shanghai, China

¹ Université de Technologie Belfort Montbéliard, ² Université Bourgogne Europe



XYZ

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- The CIAD theme automatically adds a slide at the end of the presentation to avoid “black” screen.
- The default text on this slide is: “Thank you for your attention...”.
- An other text that is available is: “Questions...”.
- The third option is to repeat the title slide.
- The class options `thanksslide`, `questionslide` and `repeattitleslide` permit to select one of these possibilities.
- The command `\finalslidetext{text}` may be used to set the text by hand.
- This slide is marked with the label `finalslide` for `\hyperlink`.
- You could display this slide at any moment with: `\thanksslide`.

5 Sectionning

6 Special Slides

- Slide for titles
- Slide with a title on the right
- Slide with text and a picture
- Slide with lawn (vertical green area)
- Slide with a grid of icons
- Slide with a single figure on the center
- Slide with an “animated” figure on the center
- Slide with a single video on the center
- Slide with text, video and logos
- Final or conclusion slide
- Slide with book description

7 Slide Content

- You are able to include a description of a book in your presentation with the command:

```
\libraryslide[options]{picture}
{title}{authors}{How published}{ISBN}
```

- The command creates a slide for a book.
- The options may be composed of pairs of name-value:
 - frametitle=text: specifies the title of the frame.
 - subtitle=text: specifies the subtitle of the book.
- If a name is not specified in the options, the “subtitle” name is assumed.

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

The command **\includegraphics** is overridden by the theme.

- If you don't specify any optional parameter related to the size of the picture in the document, the **\includegraphics** command will use by default:
width=\linewidth

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

- If you want to put something at an absolute position in your frame, you could use:
`\putat<framespec>(x,y){something}`
- **Caution:** The added elements are put less deeper than the slide text.
- For putting the elements more deeper than the slide text, use:
`\putat*<framespec>(x,y){something}`
- Example:
`\putat(180,-20){\color{red}{TESTING}}`

TESTING

6 Special Slides

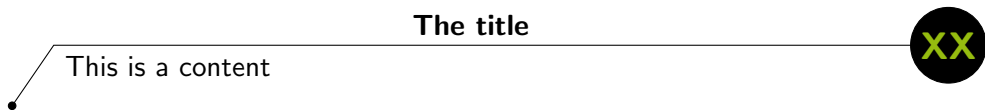
7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

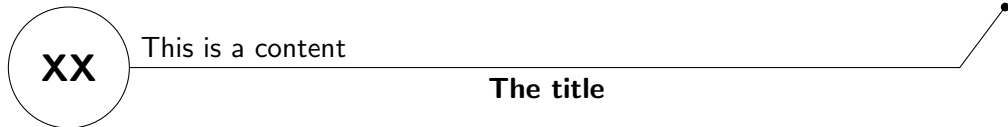
- The CIAD Beamer theme provides an environment named “left-anchor block” that provides a fancy display for a block of information:



- This type of block has a title, a text to write in the circle (e.g., XX), and a content
- The environment for rendering a left-anchor block is:

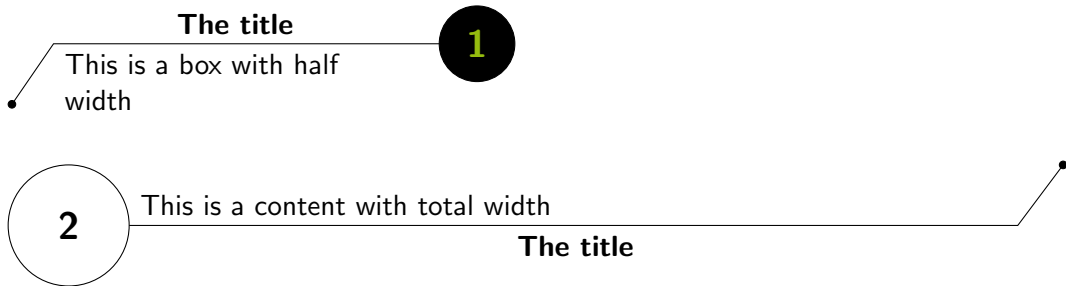
```
\begin{leftanchorblock}[width]{title}{text in the circle}
  the content of the block
\end{leftanchorblock}
```

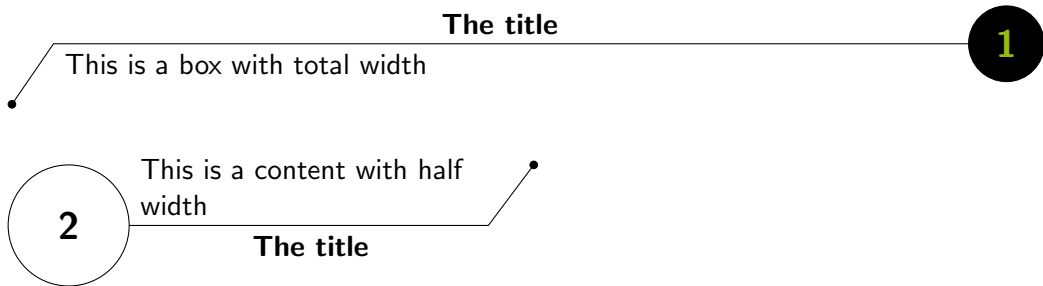

- The CIAD Beamer theme provides an environment named “right-anchor block” that provides a fancy display for a block of information:

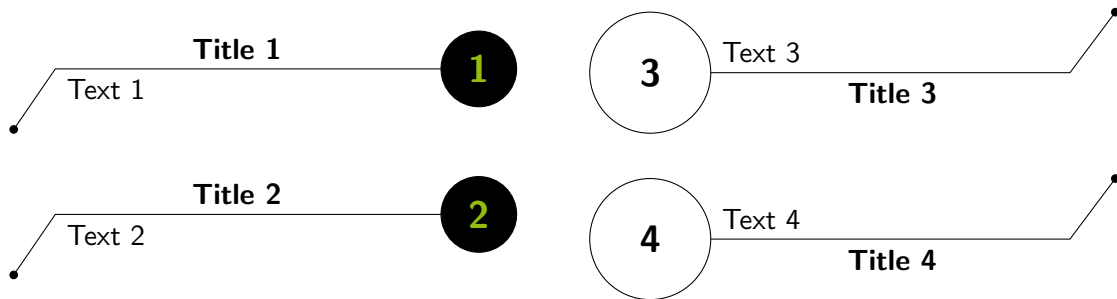


- This type of block has a title, a text to write in the circle (e.g., XX), and a content
- The environment for rendering a right-anchor block is:

```
\begin{rightanchorblock}[width]{title}{text in the circle}
  the content of the block
\end{rightanchorblock}
```







The CIAD theme defines a sequence of right arrows as:

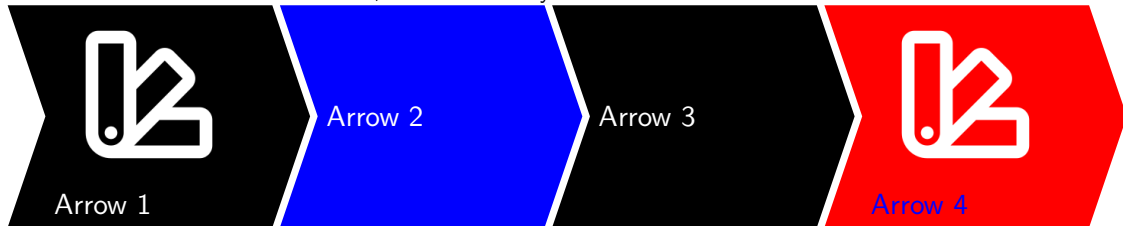


This sequence is obtained by using the following environment:

```
\begin{rightarrowsequence}[g_options]
  \arrow[a_options]{text}
\end{rightarrowsequence}
```

- Each arrow is drawn by the command `\arrow`
- `g_options` are the options applied to all the arrows (explained on later slide)
- `a_options` are the options applied to a specific arrow (explained on later slide)

Each arrow could have a decoration, as illustrated by:



This sequence is obtained by:

```
\begin{rightarrowsequence}
  \arrow[decoration={image}]{Arrow 1}
  \arrow[bg=blue]{Arrow 2}
  \arrow{Arrow 3}
  \arrow[bg=red,fg=blue,decoration={image}]{Arrow 4}
\end{rightarrowsequence}
```

- `width=<length>`: width of the sequence (default: 376.43854pt)
- `height=<length>`: height of the sequence (default: max height of the internal arrows)
- `arrowwidth=<length>`: default width for the arrows (default: adjusted width depending on the width of the sequence)
- `sep=<length>`: distance between the arrows
- `topsep=<length>`: margin at the top of the sequence
- `bottomsep=<length>`: margin at the bottom of the sequence
- `decorationsep=<length>`: distance between the decoration (usually an icon) and the text inside an arrow

- `bg=<color>`: default background color for all the arrow (default: black)
- `fg=<color>`: default text color for all the arrow (default: white)

- `width=<length>`: width of the arrow, override the global option
- `bg=<color>`: background color, override the global option
- `fg=<color>`: text color, override the global option
- `decoration=<id>`: identifier if the picture loadable with `\pgfuseimage`



The CIAD theme defines a sequence of bottom arrows as: This

sequence is obtained by using the following environment:

```
\begin{bottomarrowsequence}[g_options]
  \arrow[a_options]{text}
\end{bottomarrowsequence}
```

- Each arrow is drawn by the command `\arrow`
- `g_options` are the options applied to all the arrows (explained on later slide)
- `a_options` are the options applied to a specific arrow (explained on later slide)



Each arrow could have a decoration, as illustrated by: This sequence

is obtained by:

```
\begin{bottomarrowsequence}
  \arrow[decoration={image}]{Arrow 1}
  \arrow[bg=blue]{Arrow 2}
  \arrow{Arrow 3}
  \arrow[bg=red,fg=blue,decoration={image}]{Arrow 4}
\end{bottomarrowsequence}
```

- width=<length>: width of the sequence (default: max width of the internal arrows)
- height=<length>: height of the sequence (default: 376.43854pt)
- arrowheight=<length>: default height for the arrows
- sep=<length>: distance between the arrows
- leftsep=<length>: margin at the left of the sequence
- rightsep=<length>: margin at the right of the sequence
- decorationsep=<length>: distance between the decoration (usually an icon) and the text inside an arrow

- `bg=<color>`: default background color for all the arrow (default: black)
- `fg=<color>`: default text color for all the arrow (default: white)

- `height=<length>`: height of the arrow, override the global option
- `bg=<color>`: background color, override the global option
- `fg=<color>`: text color, override the global option
- `decoration=<id>`: identifier if the picture loadable with `\pgfuseimage`

The height of the sequence of bottom arrows may be proportional in case that the total height is not available:



This sequence is obtained by using the following environment:

```
\begin{bottomarrowsequence}[height=.8\height]
  \arrow[a_options]{text}
\end{bottomarrowsequence}
```

The command `\height` corresponds to the total height of the frame

The height of the sequence of bottom arrows could be manually provided:



This sequence is obtained by using the following environment:

```
\begin{bottomarrowsequence}[height=5cm]
  \arrow[a_options]{text}
\end{bottomarrowsequence}
```


6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

Two environments are available for definitions:

1 Standard $\text{\LaTeX}$ environment:

Definition (Name)

Explanation

```

\begin{definition} [Name]
Explanation
\end{definition}
    
```

2 Extended environment:

Name

Explanation

```

\begin{definitionblock} {Name}
Explanation
\end{definitionblock}
    
```

You could draw a simple box as:

This is the text into the simple box

The command is:

- `\simplebox[width]{text}`
`\simplebox*[width]{text}`
- `\simplebox` is a vmode box, i.e., it is assumed that the box is rendered on the entire width of the line
- `\simplebox*` is a hmode box, i.e., it accept elements on its side

The CIAD theme defines the a box for alerts:

- `\alertbox<frame_spec>\{this is an alert text\}`

this is an alert text

- `\alertbox*<frame_spec>\{this is an alert text\}`

this is an alert text

- Note that `<frame_spec>` is optional. It permits to specify the Beamer frame in which the box is displayed.

You could draw a box with a title as:

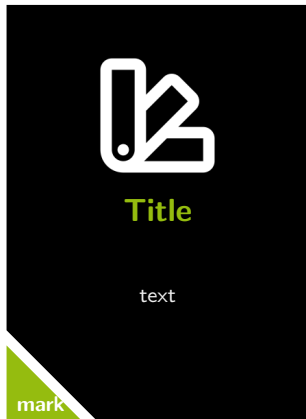


The command is:

- `\titlebox[width]{title}{text}`
`\titlebox*[width]{title}{text}`
- `\titlebox` is a vmode box, i.e., it is assumed that the box is rendered on the entire width of the line
- `\titlebox*` is a hmode box, i.e., it accept elements on its side

The CIAD theme defines a box with fancy rendering of informations alerts:

■ `\fancybox<frame_spec>[options]{Title}{text}{pgf-id}{mark}`



- `<frame_spec>` is optional. It permits to specify the Beamer frame in which the box is displayed.
- `options` is a list of options that are described on the following slide.
- `pgf-id` is the identifier of a picture that is declared with:
`\addfancyboxpicture[picture-height]{pgf-id}`
`{picture-filename}`

- width=<length>: width of the box (default: 4cm)
- height=<length>: height of the box (default: 5.5cm)
- corner=<length>: size of the corner triangle (default: 1cm)
- cornersep=<length>: size of the space between the corner triangle and the rest of the box (default: 0.2cm)
- iconheight=<length>: height of the picture (default: 1.8cm)
- topsep=<length>: size of the space between the top of the box and the picture (default: 12.0pt plus 4.0pt minus 4.0pt)
- iconsep=<length>: size of the space between the picture and the title (default: 6.0pt plus 2.0pt minus 2.0pt)
- titlesep=<length>: size of the space between the title and the text (default: 1.2cm)
- innersep=<length>: size of the space between the left or right border to the text (default: 0.1cm)

- `vpos=<tcb>`: vertical position of the box anchor (default: c)
- `bg=<color>`: color of the background
- `fg=<color>`: foreground color of the text
- `titlefg=<color>`: foreground color of title
- `cornerfg=<color>`: color of the corner's background

You could draw a box with an title and a text, vertical layout, as:



This is the text into the box

The command is:

- `\viconbox[width]{text}{pgf_id}`
`\viconbox*[width]{text}{pgf_id}`
- `\viconbox` is a vmode box, i.e., it is assumed that the box is rendered on the entire width of the line
- `\viconbox*` is a hmode box, i.e., it accept elements on its side
- The icon must be loaded by using the command:
`\addiconboxpicture[options]{pgf_id}{filename}`

You could draw a box with an icon and a text, horizontal layout, as:



This is the text into the box

The command is:

- `\hiconbox[width]{text}{pgf_id}`
`\hiconbox*[width]{text}{pgf_id}`
- `\hiconbox` is a vmode box, i.e., it is assumed that the box is rendered on the entire width of the line
- `\hiconbox*` is a hmode box, i.e., it accept elements on its side
- **The icon must be loaded by using the command:**
`\addiconboxpicture[options]{pgf_id}{filename}`

The CIAD theme defines the the following commands to put examples in the text (not in a block, as predefined in Beamer):

- `\insertexamplelabel` insert the text “example”.
- `\insertexampleslabel` insert the text “examples”.
- `\inlineexample{text}` insert a example in the text.
 Example: This is a text followed by an inline example.
`\inlineexample{some text.}`
 This is a text followed by an inline example. **Example:** some text.
- `\inlineexamples{text}` insert examples in the text.
 Example: This is a text followed by inline examples.
`\inlineexamples{some text.}`
 This is a text followed by inline examples. **Examples:** some text.

- Beamer provides the command `\framezoom` to zoom on a part of a frame. But, it create a new slide and it is difficult to return to the original slide with a single click.
- The CIAD theme provides a new command for zooming on click.
- `\zoombox[options]{box content}`
 - Display the content of the box. When clicked, display the box content after fitting it to the entire screen. When clicked again, the original slide is restore.
 - options are:
 - 1 `border=XXpt`: specify the size of the border lines around the box.
 - 2 `left=XXpt`: specify the size of the left margin.
 - 3 `right=XXpt`: specify the size of the right margin.
 - 4 `top=XXpt`: specify the size of the top margin.
 - 5 `bottom=XXpt`: specify the size of the bottom margin.
 - 6 `margin=XXpt`: specify the size of all of the margins.

Caution

The command `\zoombox` is working in viewers that are supporting JavaScript (Acrobat Reader...)

ZOOMING EXAMPLE

- The CIAD style provides the command `\adjustbox` to add margins to a box.
- `\adjustbox[options]{box content}`
- The options are:
 - `left=XXpt` is the size of the left margin.
 - `right=XXpt` is the size of the right margin.
 - `top=XXpt` is the size of the top margin.
 - `bottom=XXpt` is the size of the bottom margin.
 - `size=XXpt` is the size of all of the margins.

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

- The CIAD theme puts colorized borders around tables.
- In addition, you could create a table heading with specific colors:
 - `\tabularheading` to use the heading background.
 - `\thead{text}` to define the text of a column heading.
 - Command `\tabularhead` is a helper that is equivalent to the two commands above.
This command must be followed by `\\`

Example

```
\begin{tabular}{|l|l|}
\hline
\tabularheading\thead{A}&\thead{B}\\
\hline
C&D\\
\end{tabular}

\begin{tabular}{|l|l|}
\hline
\tabularhead{A}{B}\\
\hline
C&D\\
\end{tabular}
```

A	B
C	D

A	B
C	D

The CIAD theme includes the package `tcolorbox`.

The style `stabularx` provides a configuration that is compatible with the CIAD Beamer theme.

```
\begin{tcolorbox}[stabularx,
  tabularx={ccX},
  title={This is the title}]
  \tabularhead{A}{B}{C} \\\
  D & E & F \\\
\end{tcolorbox}
```

This is the title		
A	B	C
D	E	F

Environment `stabularx` is provided to help you to obtain colored tables

```
\begin{stabularx}
  [title={This is the title}]{ccX}
  \tabularhead{A}{B}{C} \\\
  D & E & F \\\
\end{stabularx}
```

This is the title		
A	B	C
D	E	F

The CIAD theme provides an enhanced definition of the description environment.

```
\begin{description}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{description}
```

- text1
- Item Name: text2
- text1
- Item Name: text2

The CIAD theme provides an enhanced definition of the description environment.

```
\begin{description}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{description}
```

- text1
- Item Name: text2
- text1
- Item Name: text2

The CIAD theme provides an enhanced definition of the `enumerate` environment.

```
\begin{enumerate}[counter format]
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{enumerate}
```

- 1 text1
- 2 Item Name: text2
- 3 text1
- 4 Item Name: text2

The CIAD theme provides an enhanced definition of the `enumerate` environment.

```
\begin{enumerate}[counter format]
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{enumerate}
```

- 1 text1
- 2 Item Name: text2
- 3 text1
- 4 Item Name: text2

Below, the optional parameter counter format is set to "a)":

- a) text1
- b) Item Name: text2
- c) text1
- d) Item Name: text2

Below, the optional parameter counter format is set to "a)":

- a) text1
- b) Item Name: text2
- c) text1
- d) Item Name: text2

The CIAD theme provides a compact version of the itemized list environment.

```
\begin{compactitemize}[options]
\item text1
\item<frame_spec> text2
\end{compactitemize}
```

Compact List

- text1
- text2

Standard List

- text1
- text2

The CIAD theme provides a compact version of the itemized list environment.

```
\begin{compactitemize}[options]
\item text1
\item<frame_spec> text2
\end{compactitemize}
```

Compact List

- text1
- text2

Standard List

- text1
- text2

The CIAD theme provides a compact version of the description environment.

```
\begin{compactdescription}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{compactdescription}
```

Compact Description

- text1
- Item Name: text2
- text1
- Item Name: text2

Standard Description

- text1
- Item Name: text2
- text1
- Item Name: text2

The CIAD theme provides a compact version of the description environment.

```
\begin{compactdescription}
\item text1
\item[Item Name] text2
\item<frame_spec> text1
\item<frame_spec>[Item Name] text2
\end{compactdescription}
```

Compact Description

- text1
- Item Name: text2
- text1
- Item Name: text2

Standard Description

- text1
- Item Name: text2
- text1
- Item Name: text2

- ## Example

- Introduction to Multisagent Systems for Cyber-Physical Systems

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

- The CIAD theme (re)defines the commands for several symbols:

From CIAD theme		From T _E X	
<code>\copyright</code>	©	<code>\copyright</code>	©
<code>\trademark</code>	TM	<code>\texttrademark</code>	TM
<code>\servicemark</code>	SM	<code>\textservicemark</code>	SM
<code>\regmark</code>	®	<code>\textregistered</code>	®
<code>\checkmark</code>	✓	<code>\textcheckmark</code>	✓
<code>\xmark</code>	✗		

- The standard Beamer commands for selected the text size are:

`\TINY`, `\Tiny`, `\tiny`, `\scriptsize`, `\footnotesize`, `\small`, `\normalsize`, `\large`,
`\Large`, `\huge`, `\Huge`

- The CIAD theme includes two additional commands:

- `\smaller` : to decrease the size of the text, and
- `\larger` : to increase the size of the text.

- The CIAD theme redefines the command `\emph` to display the emphasized text with a color.

Example: **This is an emphasized text.**

- The CIAD theme defines the command `\Emph` to display the “very emphasized” text with a color.

Example: **This is a “very emphasized” text.**

- The CIAD theme redefines the command `\underline` to move the line closer to the text.
- Before: Example
- After: Example

- The CIAD theme (re)defines the commands to put text in exponent or in indice.
- The commands `\textup` and `\textdown` try to add a space after the text, when it is allowed by the typographic rules (it uses the command `\xspace`).

From CIAD theme		From T _E X	
<code>\textup</code>	ABC ^{ABC} D	<code>\textsuperscript</code>	ABC ^{ABC} D
<code>\textdown</code>	ABC _{ABC} D	<code>\textsubscript</code>	ABC _{ABC} D

- The CIAD theme defines a command for making fancy the first letters of the words within a given sentence.
- command:
`\colorizedfirstletters{beamer style}{sentence}`
- `beamer style` is the name of the beamer style of the first letters. A beamer style could be defined with `\setbeamercolor` or `\setbeamercolorXXX`.
- `sentence` is the text to make fancy.

Example (with style alerted text)

This is an example of a sentence

- The CIAD theme defines a command for making fancy the words within a given sentence.
- command:
`\colorizedtailwords{beamer style}{sentence}`
- `beamer style` is the name of the Beamer style of the tail words. A beamer style could be defined with `\setbeamercolor` or `\setbeamercolorXXX`.
- `sentence` is the text to make fancy.

Example (with style alerted text)

This **is an example of a sentence**

- The CIAD theme provides commands to output localized quotes:

- **English:** `\ukquote{text}`

Example: *"text"*

- **French:** `\frquote{text}`

Example: « text »

- **Latin:** `\latquote{text}`

Example: *text*

- The following commands are used by the quote commands:

- `\textgravedbl :` "

- `\textacutedbl :` "

- `\guillemotleft :` «

- `\guillemotright :` »

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

- The CIAD theme provides two versions of the footnote command:
 - `\footnote{text1}` shows a footnote³ with a number, and
 - `\footnote*{text2}` shows a footnote without a number.

- Additionally, a footnote with bibliography citation may be added:
 - `\footcite{keys}` shows the given citations in a footnote.

³text1
 text2

- The CIAD theme provides a command to put a text on the side of the frame:
`\sidenode{text}`
- Example: `\sidenote{text on the side}`

- The CIAD theme provides a command to put a citation on the side of the frame:
`\sidecite{labels}`
- It is equivalent to:
`\sidenote{\cite{labels}}`

6 Special Slides

7 Slide Content

- \includegraphics
- Drawing
- Blocks
- Boxes
- Tables, Descriptions and Lists
- Text
- Notes
- Links

8 Slide Transitions

9 Low-level commands

- The CIAD theme provides a convenient command to include links to multimedia resources.
- `\videolink[options]{resource_path}{img_path}`
 - Display a picture with a link button. When the user click on the picture, the resource is run (viewed).
 - `options` are the options to pass to the `\includegraphics` (`width...`)
 - `resource_path` is the path to the multimedia resource.
 - `img_path` is the path to the picture to display in the slide.



- The CIAD theme provides a convenient command to create links to other slides with a picture in the link.
- `\picturegoto[options]{label}{img_path}`
 - Display a picture with a link button. When the user click on the picture, the slide with the given label is displayed.
 - `options` are the options to pass to the `\includegraphics` (width...)
 - `label` is the label of the target slide.
 - `img_path` is the path to the picture to display in the slide.



- The CIAD theme provides a convenient command to create links to other slides with a text in the link.
- `\textgoto{label}{text}`
 - Display the given text with a link button. When the user click on the text, the slide with the given label is displayed.
 - `label` is the label of the target slide.
 - `text` is the text to display in the slide.

▶ this is a link to another slide

- The CIAD theme provides a convenient command to create links to Web pages with a text in the link.
- `\hrefbutton[text]{url}`
 - Display the given text (default is web) with a link button
 - url is the URL of the target Web pge.
 - text is the text to display in the slide.

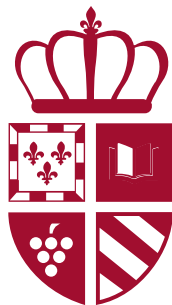
► web

- The CIAD theme provides a convenient command to include a video link into the PDF that could be displayed during the show with a viewer such as PDFPC.
- `\embeddedvideo[options]{video_path}{img_path}`
 - Display the image if the viewer cannot show up the video, or the video itself.
 - options may one of the options width, height, or view.
 - video_path is the path to the multimedia resource.
 - img_path is the path to the picture to display in the slide.

- 7 Slide Content
- 8 Slide Transitions
- 9 Low-level commands







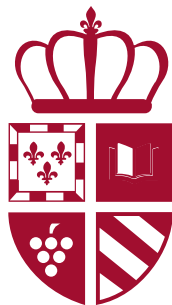
UNIVERSITÉ
BOURGOGNE
EUROPE











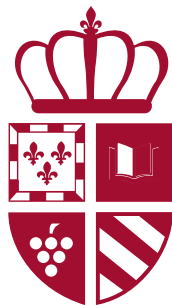
UNIVERSITÉ
BOURGOGNE
EUROPE











UNIVERSITÉ
BOURGOGNE
EUROPE





7 Slide Content

8 Slide Transitions

9 Low-level commands

- Localization
- Handlers on Frames
- Graphic Axes
- Picture Filename Resolution

Talks may be written with frames in different languages. The CIAD Beamer template provides commands for helping to building multilingual documents.

- `\languageshortname`: command that is replaced by the short name of the current language (en for English, fr for French, ge for German)
- `\inputlang{filename}`: similar to the standard `\input` but searching for a file marked for the current language with the name `filename_LG` where `filename` is the argument and `LG` is the current language code given by `\languageshortname`. If the file with name `filename_LG` is not found, then the file with name `filename` is input.
- `\includelang{filename}`: similar to the standard `\include` but searching for a file marked for the current language with the name `filename_LG` where `filename` is the argument and `LG` is the current language code given by `\languageshortname`. If the file with name `filename_LG` is not found, then the file with name `filename` is included.

- Several commands are implemented with the search method described in the previous slide:

List of Localized Commands	
Command	Localized Version
<code>\input</code>	<code>\inputlang</code>
<code>\include</code>	<code>\includelang</code>
<code>\figureslide</code>	<code>\figureslide</code>

- Command `\localized` permits to use the localized version of a known command

Example

`\localized\input{myfile}` is equivalent to `\inputlang{myfile}`

- If you want to do something at the beginning and ending of each frame, you could use:

```
\AtBeginFrame{something}
```

```
\AtEndFrame{something}
```

- The following command display the graphic axes that may be used for putting something somewhere on the slide:
`\graphicaxes`
- The following command draw the axes at the coordinates $(0,0)$:
`\showgraphicaxes`
- The size of the axes corresponds to 1 unit.

Example

`\graphicaxes`
↑
└→

- For searching a picture file into the search paths defined with `\graphicspath`, you could use the two following commands.
- For searching the file:
`\resolvepicturename{partial filename}`
- The previous command sets the global command `\resolvedfilename` to the full name of the file if it was found; or to `\relax` if it was not found.

Example

```
\graphicspath{{./imgs}}
\resolvepicturename{myfile}
\pgfdeclareimage{myfileid}{\resolvedfilename}
\pgfuseimage{myfileid}
```

- You could locally redefine the picture search path in your presentation.
- The environment `graphicspathcontext` permits to override the value of the picture search path inside its content:

```
\begin{graphicspathcontext}{paths}
...
\end{graphicspathcontext}
```

- The provided path must follow the same syntax as the parameter of the `\graphicspath` command.
- You could reuse the paths from the enclosing context by putting `\old` in the environment's parameter.

Example: `{./path/to/pictures/}{./other/path/},\old`

End of the Documentation

