

**Maxime Chupin**

[chupin@ceremade.dauphine.fr](mailto:chupin@ceremade.dauphine.fr)

[www.ceremade.dauphine.fr/~chupin/](http://www.ceremade.dauphine.fr/~chupin/)

CNRS

University of Paris-Dauphine

September 10, 2022

# Amurmaple Beamer Theme

*documentation v.1.1*

*in collaboration with Beamer and L<sup>A</sup>T<sub>E</sub>X<sup>3</sup>*



# Table of contents

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

## **i** Information

This Beamer theme is a suitable theme for my use of Beamer in applied mathematics research.

It meets my needs in my work. However, if you like this theme, and if you want to ask for or make improvements, don't hesitate to write to me !

Obviously, we refer to the documentation of the Beamer class for details, and we will assume in this little documentation that the reader is familiar with the Beamer class.

Thanks to Denis Bitouzé for the tests and recommendations to improve this theme.



# How to use it

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

# How to use Amurmaple theme

- ▶ The Amurmaple beamer theme consists in the file `beamerthemeAmurmaple.sty` that you can put in your local `~/texmf/tex/latex/contrib/beamer-contrib/themes/beamer-amurmaple` directory.
- ▶ Simply add in your preamble<sup>1</sup>

```
\documentclass{beamer}
\usetheme{Amurmaple}
```

*preamble*

- ▶ This theme depends on the following packages:

- ▶ `tcolorbox`;
- ▶ `multicol`;
- ▶ `xparse`;
- ▶ `xfp`;
- ▶ `expl3`;
- ▶ `iftex`.

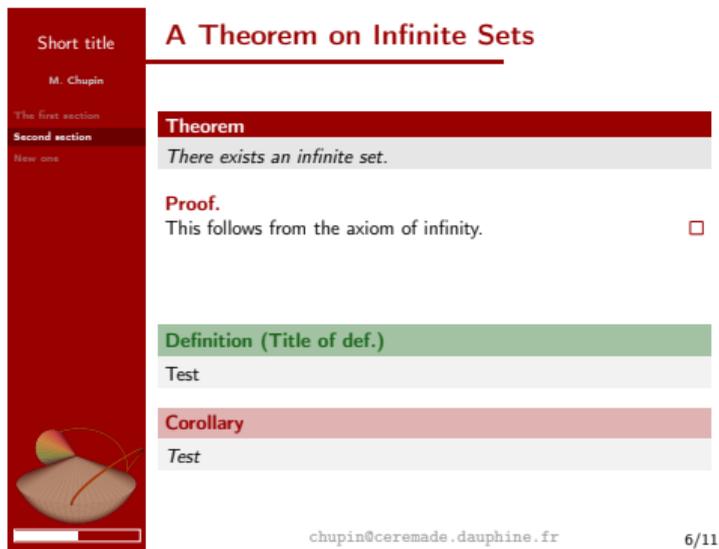
---

<sup>1</sup>Note that the listing environments of this document are not provided by Amurmaple theme.

There are some options available :

- nogauge**: that suppresses the gauge at the top of the vertical side bar of the current slide ;
- nomail**: that suppresses the mail in the vertical side bar of the current slide ;
- delaunay**: that produces a Delaunay mesh of random points in the “structure” slides (title, section, etc.). **This option can only be used with Lua $\LaTeX$**  and depends on the package `luamesh2`;

**sidebar:** that provides a *sidebar* as shown below<sup>3</sup>.



The screenshot shows a document layout with a sidebar on the left and a main content area on the right. The sidebar is dark red and contains the following text: "Short title", "M. Chupin", "The first section", "Second section" (highlighted in dark red), and "New one". At the bottom of the sidebar is a small image of a globe and a red ribbon. The main content area has a title "A Theorem on Infinite Sets" in dark red. Below the title is a "Theorem" section with a dark red header and the text "There exists an infinite set." followed by a "Proof." section with the text "This follows from the axiom of infinity." and a small square symbol. Below the proof is a "Definition (Title of def.)" section with a green header and the text "Test". Below the definition is a "Corollary" section with a light red header and the text "Test". At the bottom of the page, the email address "chupin@ceremade.dauphine.fr" and the page number "6/11" are displayed.

**sidebarwidth=*value* (with dimension):** when using the sidebar option, you can adjust the sidebar width (default 58pt).

**rule:** that add a rule between the color areas in the different slides: title (see p. section 4), section and part (see p. 14), **sepframe** frame(see p. 20), thanks frame (see p. 21), as well as classical slides, between the left bar (sidebar or not) and the text area.

Maxime Chupin  
chupin@ceremade.dauphine.fr  
www.ceremade.dauphine.fr/~chupin/  
CNRS  
University of Paris-Dauphine  
April 21, 2022

Long title  
With a subtitle  
in collaboration with L<sup>A</sup>T<sub>E</sub>X

Short title — M. Chupin

Block title  
Cras viverra metus rhoncus sem.

Gentle reader: This is a handbook about T<sub>E</sub>X, a new typesetting system G intended for the creation of beautiful books—and especially for books that contain a lot of mathematics.  
Donald E. Knuth, *The T<sub>E</sub>Xbook*

2/11

*Examples using the `rule` option.*

**rulecolor=*<color>*:** that allows to choose the color for the rule of the `rule` option (default black).

**leftframetitle:** that aligns the `frametitle` to the left of the slide.

`amurmapleblue`: that changes the main color (`structure`) to a certain blue (see slide 7) ;  
`amurmaplegreen`: that changes the main color (`structure`) to a certain green (see slide 7);  
For example, these slides are produced with the following call<sup>4</sup>:

```
\usetheme[nomail, delaunay]{Amurmaple}
```

*preamble*

---

<sup>2</sup>Maxime Chupin. *luamesh, compute and draw meshes*. <https://ctan.org/pkg/luamesh>. 2022.

<sup>3</sup>In general, we strongly recommend the use of the `aspectratio=169` option of beamer, but even more strongly with the `sidebar` option.

<sup>4</sup>We use the *Bitstream Charter* font family provided by the package *Xcharter-Math* with the serif Beamer theme. Daniel Flipo. *The Xcharter-math package. XCharter-based OpenType Math font for LuaTeX and XeTeX*. Version 0.32. URL: <https://ctan.org/pkg/xcharter-math> (visited on 09/10/2022).

# Classical Beamer Tools

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

This theme provides some colors :

```
\definecolor{AmurmapleRed}{rgb}{0.6,0.,0.}  
\definecolor{AmurmapleOrange}{RGB}{230,108,17}  
\definecolor{AmurmapleBlue}{RGB}{55,119,231}  
\definecolor{AmurmapleGreen}{rgb}{0.1,0.4,0.1}
```

`AmurmapleRed` is used to redefine the `structure` Beamer color<sup>5</sup>, `AmurmapleOrange` is used to redefine the `text alerted` Beamer color, `AmurmapleGreen` is used for the math definition (see slide 16) and for the block `title example` Beamer color, and the `AmurmapleBlue` for the new `environnement information` (see slide 22).

## Color Theme Option

This theme provides two theme options to change the color settings:

`amurmapleblue` that sets `AmurmapleBlue!80!black` as structure color ;

`amurmaplegreen` that sets `AmurmapleGreen!80!black` as structure color.

In fact, internally, four colors are defined: `Amurmaple@structure`, `Amurmaple@alert`, `Amurmaple@info` and `Amurmaple@example`.

The color theme option is used as follow

```
\usetheme[amurmapleblue]{amurmaple}
```

<sup>5</sup>So if you redefine the `structure` color, the Amurmaple theme should change correctly.

## Beamer buttons

```
\beamerbutton{Button}~\beamerskipbutton{Skip Button}~\beamerreturnbutton{Return}
```

Button    » Skip Button    « Return

## Alert and structure commands

```
\structure{Test structure} \alert{Test alert}
```

Test structure **Test alert**

- 1 Introduction
- 2 How to use it
  - Theme Options
- 3 Classical Beamer Tools
  - Colors
  - Classical commands
  - Classical environnement
  - Section and Part Frames
  - Maths
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

## Block environments

---

### Block

Test of the `\begin{block}... \end{block}` Beamer environment.

### Alert Block

Test of the `\begin{alertblock}... \end{alertblock}` Beamer environment.

### Example Block

Test of the `\begin{exampleblock}... \end{exampleblock}` Beamer environment.

## Abstract environment

### Abstract

*This is the result of the `\begin{abstract}... \end{abstract}` environment.*

## Quotation environment

The environment `\begin{quotation}[\langle author(s)\rangle]... \end{quotation}` has been redefined allowing an optional argument to provide the author(s) of the quotation.

*Gentle reader: This is a handbook about  $\TeX$ , a new typesetting system  $G$  intended for the creation of beautiful books—and especially for books that contain a lot of mathematics.*

Donald E. Knuth, *The  $\TeX$ book*

## Lists

---

The style of the standard enumerate and itemize lists has been modified as you can see below

- ▶ Eggs
- ▶ Plants
  - ▶ Flowers
- ▶ Animals

- 1 Eggs
- 2 Plants
- 3 Animals
  - a. Dogs
  - b. Cats

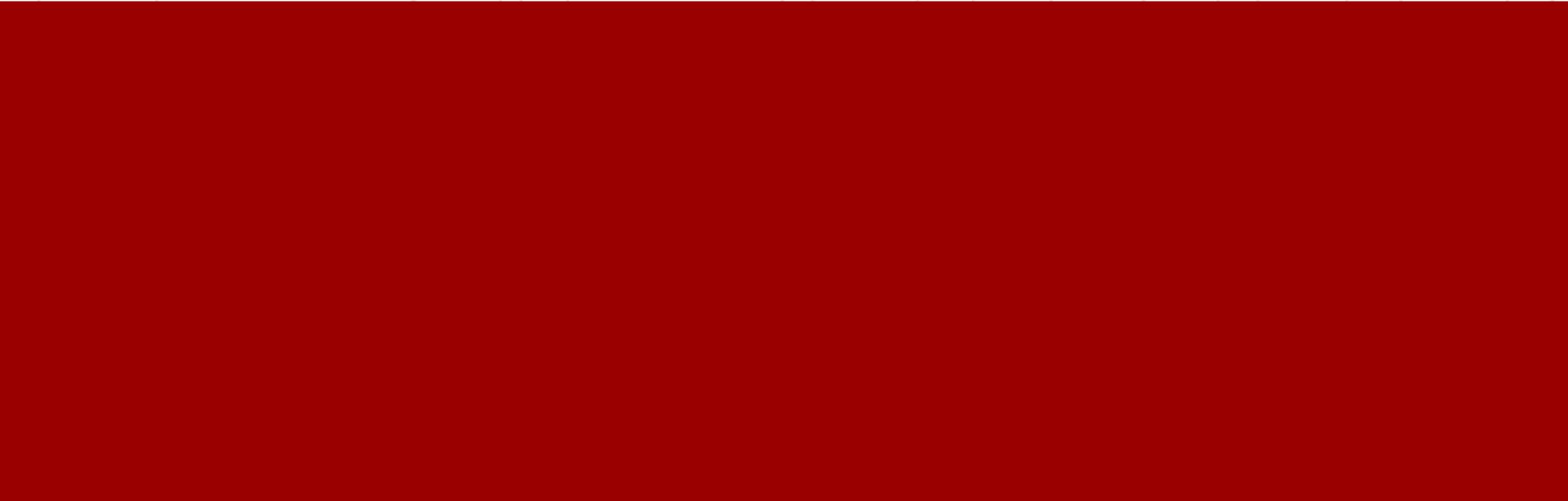
The standard `section page` and `part page` have been modified. The following code produce the next slide (the `part slide` is not generated because this document does not use part sectionning).

```
\begin{frame}
\sectionpage
\end{frame}

%\begin{frame}
%\partpage
%\end{frame}
```



# Section 3: **Classical Beamer Tools**



▶ `\begin{theorem}[\langle Title of th. (optional)\rangle] \dots \end{theorem}`

## Theorem (Title of th. (optional))

*There exists an infinite set.*

▶ `\begin{example} \dots \end{example}`

## Example

The set of natural numbers is infinite.

▶ `\begin{definition}[\langle Title of def. (optional)\rangle] \dots \end{definition}`

## Definition (Title of def. (optional))

A simple definition.

▶ `\begin{corollary}[\langle Title of corollary (optional) \rangle] \dots \end{corollary}`

**Corollary (Title of corollary (optional))**

*A simple corollary.*

▶ `\begin{proof} \dots \end{proof}`

**Proof.**

This follows from the axiom of infinity. □



# Title Page

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

As shown in this document, the title page has been customized. In addition to the classic commands for making the title page, the Amurmaple theme provides new commands.

The new commands are :

- ▶ `\mail{<mail>}`: that is used to provide the mail. Without the theme option `nomail`, it is also added on the vertical side bar on the current slide.
- ▶ `\webpage{<webpage>}`: that is used to provide the personal webpage of the speaker (or the project website).
- ▶ `\collaboration{<collaboration(s)>}`: that is used to provide the collaborators for the presented work.

The `\logo` command can be used to add a logo to each slide. In the standard theme, the logo is put in the bottom right corner of the slide, just above the page numbering. When the option `sidebar`, the logo is put at the bottom of the side bar (above the gauge if it is used).

Here the example used to generate this documentation.

```
\title[Amurmaple documentation]{Amurmaple Beamer Theme}
\author[M.~Chupin]{Maxime Chupin}
\subtitle{documentation}
\institute[CNRS]{CNRS\
University of Paris-Dauphine}
\date{Mai 08, 2022}
\titlegraphic{\includegraphics[width=4cm]{logo.png}}
\mail{chupin@ceremade.dauphine.fr}
\webpage{www.ceremade.dauphine.fr/~chupin/}
\collaboration{in collaboration with Beamer and \hologo{LaTeX3}}
```

# New Frame Commands

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

`\sepframe [⟨title=⟨mytitle⟩,image=⟨my image⟩⟩]`

The newcommand `\sepframe` is provided by the Amurmaple theme. This command allows you to generate a slide in the manner of a section page but with a slight improvement. In the red part below is generated the table of contents (with depth 1).

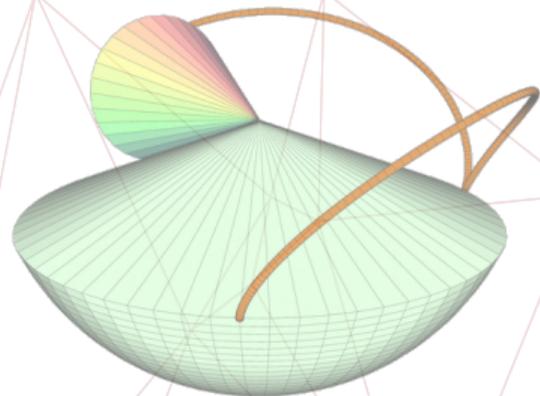
Moreover, this command admits two optional arguments:

- title:** this optional argument allows to modify the default title of the frame (which is the current section name) ;
- image:** this optional argument allows to add an image to the frame (no image by default).

For exemple, we could use

```
\sepframe [title={My title},image={\includegraphics [width=5cm] {logo.png}}]
```

The result is the next frame.



# My title

- 1 Introduction
- 2 How to use it
- 3 Classical Beamer Tools
- 4 Title Page
- 5 New Frame Commands
- 6 New Commands and Environments

```
\thanksframe{⟨thanking message⟩}
```

The newcommand `\thanksframe` is provided by the Amurmaple theme. This command allows you to generate a slide to thank the audience. The text written to thank is a mandatory argument (e.g. “*The end*”) and the optional argument allows to change the default image which is the *title graphics* (`\inserttitlegraphic` exactly).

The following code produces the next slide.

```
\thanksframe{Merci beaucoup~!}
```



**Merci beaucoup !**

The Amurmaple theme provides some other commands and environments.

## New Commands

---

`\framesection{<text>}`

Command to add a section title inside a frame.

The following example produced the previous frame sectioning *New Commands*

```
\framesection{New Commands}
```

`\boxalert{<text>}`

Another `\alert` command with a colored box.

## Some New Commands and Environments II

---

`\boxalert`{This is another} command box to compare to `\alert`{this one}.

---

`This is another` command box to compare to `this one`.

## New Environments

*Note:* Each environment provided by the Amurmaple theme uses translations for title names. Hence, depending on the `babel` setting, Remark becomes *Remarque*, *Bemerkung*,...

```
\begin{information} [changed title]  
  environment content  
\end{information}
```

The Amurmaple theme provides an information environment.

```
\begin{information}  
  This is important information.  
\end{information}
```

## Some New Commands and Environments IV

### Information

This is an important information.

This environment has an optional argument to change the *Information* title.

```
\begin{information}[More information]
  Maybe more important information?
\end{information}
```

### More information

Maybe more important information?

Because this environment is built with a `tcolorbox`, to use a footnote in it, you have to use `\footnote[frame]{...}`.

## Some New Commands and Environments V

```
\begin{remark} [title complement]  
  environment content  
\end{remark}
```

The Amurmaple theme provides a remark environment with an optional argument to add a comment in the title (as for the theorem environment).

```
\begin{remark}[Some complement]  
  This is a capital remark.  
\end{remark}
```

Remark (Some complement)

This is a capital remark.

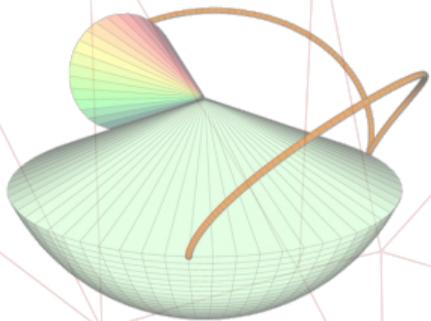
Because this environment is built with a `tcolorbox`, to use a footnote in it, you have to use `\footnote[frame]{...}`.



# Appendix

## 7 Appendix

In the appendix part of the document, (after the command `\appendix`) the display is slightly modified as you can see in this slide. If the gauge exists, it disappears, the numbering of slides is reset and the display is in roman form.



**The end!**