

# Trigon

## A Modern, elegant and versatile theme for Beamer

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### Contents

1	Introduction	2
2	Getting Started	2
2.1	Installing from CTAN	2
2.2	Installing from Gitlab	3
2.3	Overleaf	3
2.4	A Minimal Example	4
2.5	Dependencies	4
3	Customization	5
3.1	Package options	5
3.2	Color Customization	7
3.3	Logos	8
4	Tips & Tricks	8
4.1	Backup Slides	8
5	Known Issues	9
5.1	Title formats	9
6	License	9
7	Implementation	9

7.1	Trigon parent theme . . . . .	9
7.2	Trigon inner theme . . . . .	12
7.3	Trigon outer theme . . . . .	26
7.4	Trigon font theme . . . . .	29
7.5	Trigon color theme . . . . .	35

## 1 Introduction

Trigon found its origin and inspiration in the graphical guidelines resulting from the visual identity overhaul of the [University of Liège](#) (Belgium).

Although directly inspired from these guidelines, Trigon was stripped out of any mention or specificities related the University and its faculties. This makes the Trigon theme perfectly suitable for many different contexts.

The final product provides a modern, elegant and versatile theme with a high degree of customization.

Trigon’s codebase lives on [Gitlab](#). The implementation of this theme is strongly inspired from the excellent [Metropolis](#) theme by Matthias Vogelgesang, from which it borrows numerous options.

Any feature request, issue report or merge requests are welcome.

## 2 Getting Started

### 2.1 Installing from CTAN

The latest stable version of Trigon is available on [CTAN](#) and should now be part of the usual  $\text{\TeX}$  distributions ( $\text{\TeX}$  Live, Mac $\text{\TeX}$  , Mik $\text{\TeX}$  ), under the name `beamertheme-trigon`. It means that if your distribution is kept up-to-date, the package should normally be already installed on your system. If this is not the case, consider updating the packages of your Tex distribution.

For  $\text{\TeX}$  Live and Mac $\text{\TeX}$  users, this usually means running

```
tlmgr update --all
```

, or if administrative privileges are required

```
sudo tlmgr update --all
```

For MikTeX users, please refer to [the official MikTeX documentation](#).

## 2.2 Installing from Gitlab

If you want to use the cutting-edge development version of Trigon, you can install it manually by following these steps:

Download the source from [Trigon repository](#) using `git clone` or as a [zip archive](#) of the latest development version.

Compile the style files by running `make sty` inside the downloaded directory. (Or run L<sup>A</sup>T<sub>E</sub>X directly on `source/trigontheme.ins`.)

Move the resulting `*.sty` files to the folder containing your presentation. To use Trigon with many presentations, run `make install` or move the `*.sty` files to a folder in your T<sub>E</sub>X path instead.

Use the theme by declaring `\usetheme{trigon}` in the preamble of your document.

Trigon uses the Make build system to offer the following installation options for advanced users:

`make sty` builds the theme style files.

`make doc` builds this documentation manual.

`make demo` builds a demo presentation to test the features of Trigon.

`make all` builds the theme and manual.

`make clean` removes the files generated by `make all`.

`make install` installs the theme into your local texmf folder.

`make uninstall` removes the theme from your local texmf folder.

## 2.3 Overleaf

Since October 2021, [TeXLive 2021 is available on Overleaf](#). Trigon is therefore automatically supported for new documents. If you want to switch older documents to use the Trigon theme, you need to [select TeXLive 2021 or higher as your TeX Live version](#) (this may cause issues with other packages used in your presentation).

In addition to that, a template project was created and is publicly available in the [Overleaf Gallery](#) to bootstrap your presentation.

## 2.4 A Minimal Example

The following code shows a minimal example of a Beamer presentation using Trigon.

```
\documentclass{beamer}
\usetheme{trigon}      % Use trigon theme
\title{A minimal example}
\subtitle{A subtitle example}
\date{\today}
\author{Thomas Lambert}
\institute{Your university or company}
\begin{document}
  \maketitle
  \section{First Section}
  \begin{frame}{First Frame}
    Hello, world!
  \end{frame}
\end{document}
```

## 2.5 Dependencies

Trigon depends on the **beamer** class and the following standard packages:

- **tikz**
- **pgfopts**

The theme works best with the open source [Source Sans Pro](#) font from Adobe. Therefore, the package **sourcesanspro** is loaded by default with the theme. However, if the user prefers to select an other font, the theme option **nosourcefonts** can be used to prevent the font package from being loaded.

## 3 Customization

### 3.1 Package options

Trigon provides a number of options, which can be set using a key=value interface. The primary way to set options is to provide a comma-separated list of option-value pairs when loading Trigon in the preamble:

```
\usetheme[option1=value1, option2=value2, ...]{trigon}
```

Options can be changed at any time — even mid-presentation! — with the `\trigonset` macro.

```
\trigonset{option1=newvalue1, option2=newvalue2, ...}
```

The list of options is structured as shown in the following example.

option key	list of possible values	default
------------	-------------------------	---------

A short description of the option.

As Trigon implementation is heavily inspired from the excellent [Metropolis](#) theme by Matthias Vogelgesang, many of Metropolis options are also available in Trigon.

#### 3.1.1 Main theme

background	light,dark	light
------------	------------	-------

Provides the option to have a dark background and light foreground instead of the reverse.

titleformat	regular, smallcaps, allsmallcaps, allcaps	regular
-------------	---	---------

Changes the format of titles, subtitles, section titles, frame titles, and the text on “standout” frames. The available options produce Regular, SmallCaps, allsmallcaps, or ALLCAPS titles. Please refer to [Section 5.1](#) for known issues with these options.

usesourcefonts	true,false	true
----------------	------------	------

Chooses if the `sourcesanspro` font package should be loaded `true` or not `false`.

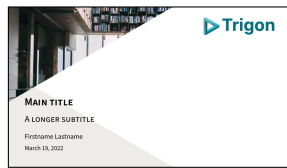
### 3.1.2 Inner theme

**sectionpage** `none, simple` ..... `simple`

Adds a slide at the start of each section (`simple`). The `none` option disables the section page.

**titlestyle** `plain, style1, style2` ..... `style2`

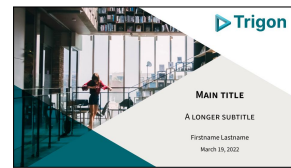
Changes the layout of the title page.



plain



style1



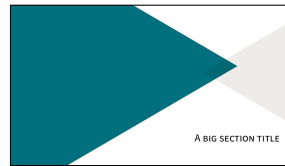
style2 (default)

**sectionstyle** `plain, style1, style2, style3` ..... `plain`

Changes the layout of the section page. `style3` is similar to `plain` but with the right triangle in grey instead of theme color.



plain (default)



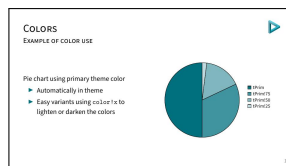
style1



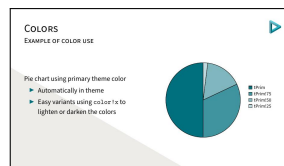
style2

**slidestyle** `blank, style1, cyber` ..... `blank`

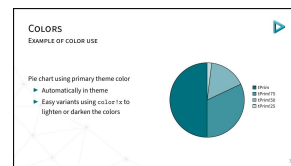
Changes the background of the regular frames.



blank (default)



style1



cyber

### 3.1.3 Outer theme

**numbering** `none, counter, fraction` . . . . . `counter`

Controls whether the frame number at the bottom right of each slide is omitted (`none`), shown (`counter`) or displayed as a fraction of the total number of frames (`fraction`).

### 3.1.4 Color theme

**block** `transparent, fill` . . . . . `fill`

Optionally adds a light grey background to block environments like `theorem` and `example`.

**headingcolor** `default, theme` . . . . . `default`

Controls whether the color of all headings (title page, frame title, etc.) should be in black (`default`) or in a slightly darker shade of the theme color `theme`.

**textgcolor** `default, theme` . . . . . `default`

Controls whether the color of the regular text elements should be in black (`default`) or in a slightly darker shade of the theme color `theme`.

### 3.1.5 Font theme

**titleformat title** `regular, smallcaps, allsmallcaps, allcaps` . . . . . `regular`  
**titleformat subtitle** Individually controls the format of titles, subtitles, section titles, and frame titles  
**titleformat section** (see `titleformat`, above).  
**titleformat frame**

## 3.2 Color Customization

The included Trigon color theme is used by default, but its colors can be easily changed to suit your tastes. All of the theme's styles are defined in terms of a few main colors:

- **tPrim** The primary theme color, used for main triangle elements, and for headings and text if the appropriate options are selected.
- **tSec** The secondary theme color (lighter shade of the primary color), used for some triangle elements and example text.

- **tAccent** The accent color, used mostly for alerted text.
- **tGrey** A grey color, used for background elements (triangles, blocks, etc.).
- **tTxt** The default text color.
- **tBg** The default background color.
- **tGreyBg** A tint of grey to use for the triangle elements.
- **tTheme** A tint of the **tPrim** color to use for some triangle elements.

An easy way to customize the theme is to redefine these colors using

```
\colorlet{tPrim}{ ... }
\colorlet{tSec}{ ... }
...
```

in your preamble.

### 3.3 Logos

The package allows the inclusion of logos on the title page and on the content slides. For that, the following commands are defined:

```
\biglogo[<options>]{path/to/your/titlepage_logo}
\smalllogo[<options>]{path/to/your/titlepage_logo}
```

These two commands are just replacements for `\includegraphics` and they will pass the options as-is so you can perfectly size and position the images.

## 4 Tips & Tricks

### 4.1 Backup Slides

Speakers will often include extra slides at the end of their presentation to refer to during audience questions. One easy way to do this is to include the **appendixnumberbeamer** package in your preamble and call `\appendix` before your backup slides.

Trigon will automatically turn off slide numbering for slides in the appendix.



## 5 Known Issues

### 5.1 Title formats

Be aware that not every font supports small caps, so the `smallcaps` or `allsmallcaps` options may not work if you use a font other than `sourcesanspro`.

The title format options `allsmallcaps` and `allcaps` are quite nice from an aesthetic point of view, but their use of `\MakeLowercase` and `\MakeUppercase` can cause unexpected problems. For example:

- Some commands, like `\`, do not work inside `\MakeLowercase` and `\MakeUppercase`. (See Metropolis [#125](#))
- Only alphabetic characters are affected by `\MakeLowercase`, so numerals and punctuation remain at full height. This can spoil some of the aesthetic benefits of `allsmallcaps`. (See Metropolis [#33](#))
- `\MakeLowercase` and `\MakeUppercase` apply to math mode and `\scshape` does not. This can easily introduce mathematical errors that are hard to catch.
- It is impossible to typeset symbols which are encoded as uppercase letters in a different font. In particular, `\mathbb` and `\mathcal` letters will be replaced by other math glyphs. (See Metropolis [#153](#))

The `allsmallcaps` and `allcaps` options are safe to use if your titles contain only alphabetic characters and do not require the expansion of any macros.

## 6 License

Trigon is licensed under the terms of the [Creative Commons Attribution-ShareAlike 4.0](#) license.

## 7 Implementation

### 7.1 Trigon parent theme

The primary job of this package is to load the component sub-packages of the Trigon theme and route the theme options accordingly. It also provides some custom commands and environments for the user.

### 7.1.1 Package dependencies

```
1 \RequirePackage{pgfopts}
2 \RequirePackage{tikz}
```

### 7.1.2 Options

Most options are passed off to the component sub-packages.

```
3 \pgfkeys{/trigon/.cd,
4   .search also={
5     /trigon/inner,
6     /trigon/outer,
7     /trigon/color,
8     /trigon/font
9   }
10 }
```

`titleformat plain` Controls the formatting of the text on standout “plain” frames.

```
11 \pgfkeys{
12   /trigon/titleformat plain/.cd,
13   .is choice,
14   regular/.code={%
15     \let\trigon@plaintitleformat\@empty%
16     \setbeamerfont{standout}{shape=\normalfont}%
17   },
18   smallcaps/.code={%
19     \let\trigon@plaintitleformat\@empty%
20     \setbeamerfont{standout}{shape=\scshape}%
21   },
22   allsmallcaps/.code={%
23     \let\trigon@plaintitleformat\MakeLowercase%
24     \setbeamerfont{standout}{shape=\scshape}%
25     \PackageWarning{beamerthemetrigon}{%
26       Be aware that titleformat plain=allsmallcaps can lead to problems%
27     }
28   },
29   allcaps/.code={%
30     \let\trigon@plaintitleformat\MakeUppercase%
31     \setbeamerfont{standout}{shape=\normalfont}%
32     \PackageWarning{beamerthemetrigon}{%
```

```

33     Be aware that titleformat plain=allcaps can lead to problems%
34   }
35 },
36 }

```

**titleformat** Sets a standard format for titles, subtitles, section titles, frame titles, and the text on standout “plain” frames.

```

37 \pgfkeys{
38   /trigon/titleformat/.code=\pgfkeysalso{
39     font/titleformat title=#1,
40     font/titleformat subtitle=#1,
41     font/titleformat section=#1,
42     font/titleformat frame=#1,
43     titleformat plain=#1,
44   }
45 }

```

**usesourcefonts** Select whereas the Source Sans Pro font is being loaded automatically or not.

```

46 \newif\if@trigon@usesourcefonts
47 \pgfkeys{/trigon/.cd,
48   usesourcefonts/.is if=@trigon@usesourcefonts,
49   usesourcefonts=true,
50 }

```

### 7.1.3 Component sub-packages

Having processed the options, we can now load the component sub-packages of the theme.

```

51 \useinnertheme{trigon}
52 \useoutertheme{trigon}
53 \usecolortheme{trigon}
54 \usefonttheme{trigon}

```

### 7.1.4 Custom commands

The parent theme defines custom commands as their proper usage may depend on multiple sub-packages.

`\metroset` Allows the user to change options midway through a presentation.

```
55 \newcommand{\trigonset}[1]{\pgfkeys{/trigon/.cd,#1}}
```

### 7.1.5 Process package options

```
56 \ProcessOptionsBeamer
57 \ProcessPgfOptions{/trigon}
58 \if@trigon@usesourcefonts%
59   \RequirePackage[default,t1,semibold]{sourcesanspro}
60 \fi
```

## 7.2 Trigon inner theme

A `beamer` inner theme dictates the style of the frame elements traditionally set in the “body” of each slide. These include:

- title, part, and section pages;
- main background elements;
- itemize, enumerate, and description environments;
- block environments including theorems and proofs;
- figures and tables; and
- footnotes and plain text.

### 7.2.1 Package dependencies

```
61 \RequirePackage{pgfopts}
62 \RequirePackage{tikz}
63 \usetikzlibrary{calc,3d}
```

### 7.2.2 Definitions

We define the command `\biglogo` to specify the logo that needs to be displayed on the title frame. This command is just a replacement for `\includegraphics`, so it accepts the same options.

```
64 \def\logbig{}
65 \newcommand*\biglogo[2][width=0.28\textwidth]{
66   \ifx{#2}\@empty\else
67     \edef\logbig{\includegraphics[#1]{#2}}
```

```

68 \fi
69 }

```

### 7.2.3 Options

**sectionpage** Controls whether a slide with the section title should be inserted at the beginning of the section or not.

```

70 \pgfkeys{
71   /trigon/inner/sectionpage/.cd,
72   .is choice,
73   none/.code=\trigon@disablesectionpage,
74   simple/.code=\trigon@enablesectionpage
75 }

```

**slidestyle** Controls the layout that should be used for regular slides.

```

76 \def\slidestyle{}
77 \pgfkeys{
78   /trigon/inner/slidestyle/.cd,
79   .is choice,
80   blank/.code=\def\slidestyle{blank}
81   \setbeamertemplate{background}[\slidestyle],
82   style1/.code=\def\slidestyle{smallcornertriangle}
83   \setbeamertemplate{background}[\slidestyle],
84   cyber/.code=\def\slidestyle{cyberbottom}
85   \setbeamertemplate{background}[\slidestyle]
86 }

```

**titlestyle** Controls the layout that should be used for the title page.

```

87 \def\titlestyle{}
88 \pgfkeys{
89   /trigon/inner/titlestyle/.cd,
90   .is choice,
91   plain/.code=\def\titlestyle{bottomtrianglescolor},
92   style1/.code=\def\titlestyle{titlesmallimage},
93   style2/.code=\def\titlestyle{titlebigimage}
94 }

```

**sectionstyle** Controls the layout that should be used for the title page.

```

95 \def\sectionstyle{}
96 \pgfkeys{
97   /trigon/inner/sectionstyle/.cd,
98   .is choice,
99   plain/.code=\def\sectionstyle{bottomtrianglescolor},
100   style1/.code=\def\sectionstyle{bigtriangles},
101   style2/.code=\def\sectionstyle{lefttriangles},
102   style3/.code=\def\sectionstyle{bottomtrianglesbw}
103 }

```

`\trigon@inner@setdefaults` Sets default values for the inner theme options.

```

104 \newcommand{\trigon@inner@setdefaults}{
105   \pgfkeys{/trigon/inner/.cd,
106     sectionpage=simple,
107     slidestyle=blank,
108     titlestyle=style2,
109     sectionstyle=plain
110   }
111 }

```

#### 7.2.4 Backgrounds

First of all, we define a few commands in order easily create the triangles used as the main design elements of the theme. All these are defined with respect to the `\paperwidth` and `\paperheight` of the document, so that it fits the different aspect ratio possible.

`\leftTriangle` Defines a triangle with the base on the left side (pointing right).

```

112 \newcommand{\leftTriangle}[2]{
113   (#1,#2)
114   -- (0,{#2 + tan(30)*#1} )
115   -- (0,{#2 - tan(30)*#1} )
116   -- cycle;
117 }

```

`\rightTriangle` Defines a triangle with the base on the right side (pointing left).

```

118 \newcommand{\rightTriangle}[2]{
119   (#1,#2)

```

```

120 -- (\the\paperwidth,{#2 + tan(30)*(\the\paperwidth-#1)} )
121 -- (\the\paperwidth,{#2 - tan(30)*(\the\paperwidth-#1)} )
122 -- cycle;
123 }

```

`\topTriangle` Defines a triangle with the base on the bottom side (pointing top).

```

124 \newcommand{\topTriangle}[2]{
125   (#1,#2)
126   -- ({#1 - tan(60)*#2},0)
127   -- ({#1 + tan(60)*#2},0)
128   -- cycle;
129 }

```

`\leftColorTriangle` Defines a colored triangle with the base on the left side (pointing right).

```

130 \newcommand{\leftColorTriangle}[3]{
131   \path[fill=#3]
132   \leftTriangle{#1}{#2}
133 }

```

`\rightColorTriangle` Defines a colored triangle with the base on the right side (pointing left).

```

134 \newcommand{\rightColorTriangle}[3]{
135   \path[fill=#3]
136   \rightTriangle{#1}{#2}
137 }

```

`\topColorTriangle` Defines a colored triangle with the base on the bottom side (pointing top).

```

138 \newcommand{\topColorTriangle}[3]{
139   \path[fill=#3]
140   \topTriangle{#1}{#2}
141 }

```

We then define the different backgrounds choices.

`blank` Blank slide background.

```

142 \defbeamertemplate{background}{blank}{}

```

**smallcornertriangle** Background with a small triangle in bottom left corner (used for normal frames when the appropriate option is selected).

```

143 \defbeamertemplate{background}{smallcornertriangle}{
144   \begin{tikzpicture}[blend group=multiply]
145     \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
146     \leftColorTriangle{0.62\paperwidth}{0}{tGrey!30!tBg}
147   \end{tikzpicture}
148 }

```

**cyberbottom** Background with "mesh" effect on the bottom left corner (used for normal frames when the appropriate option is selected).

```

149 \defbeamertemplate{background}{cyberbottom}{
150   \tikzstyle{cyberVertex}=[scale=1,draw=tGreyBg,circle,fill=tBg]
151   \tikzstyle{cyberVertex2}=[scale=0.5,draw=tGreyBg,circle,fill=tGreyBg]
152   \tikzstyle{cyberEdge} = [draw,color=tGreyBg]
153   \begin{tikzpicture}%[blend group=multiply]
154     \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
155     \foreach \pos/\name in {
156       {(-0.05\paperwidth,0.75\paperheight)/0},
157       {(0.02\paperwidth,0.53\paperheight)/1},
158       {(-0.04\paperwidth,0.38\paperheight)/2},
159       {(0.08\paperwidth,0.40\paperheight)/3},
160       {(0.052\paperwidth,0.21\paperheight)/5},
161       {(0.24\paperwidth,0.26\paperheight)/6},
162       {(-0.08\paperwidth,-0.06\paperheight)/7},
163       {(0.12\paperwidth,0.07\paperheight)/8},
164       {(0.2\paperwidth,0.-0.08\paperheight)/9},
165       {(0.38\paperwidth,0.06\paperheight)/10},
166       {(0.56\paperwidth,-0.08\paperheight)/11}}
167     \node[cyberVertex] (\name) at \pos {};
168     \foreach \pos/\name in {
169       {(-0.05\paperwidth,0.75\paperheight)/0},
170       {(0.02\paperwidth,0.53\paperheight)/1},
171       {(-0.04\paperwidth,0.38\paperheight)/2},
172       {(0.08\paperwidth,0.40\paperheight)/3},
173       {(0.052\paperwidth,0.21\paperheight)/5},
174       {(0.24\paperwidth,0.26\paperheight)/6},
175       {(-0.08\paperwidth,-0.06\paperheight)/7},

```



```

176      {(0.12\paperwidth,0.07\paperheight)/8},
177      {(0.2\paperwidth,0.-0.08\paperheight)/9},
178      {(0.38\paperwidth,0.06\paperheight)/10},
179      {(0.56\paperwidth,-0.08\paperheight)/11}}
180      \node[cyberVertex2] (\name_2) at \pos {};
181      \foreach \source/ \dest in
182      {0/1,1/2,1/3,2/3,2/5,3/5,3/6,5/6,5/7,7/8,5/8,8/6,8/9,6/9,9/10,10/6,10/11}
183      \path[cyberEdge] (\source) -- (\dest);
184      \end{tikzpicture}
185 }

```

**titlebigimage** Background for title page with a big image in the top left corener.

```

186 \defbeamertemplate{background}{titlebigimage}{
187   \begin{tikzpicture}
188     \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
189     \begin{scope}[blend group=multiply]
190       \path[fill=tTheme]\leftTriangle{0.5\paperwidth}{0};
191       \topColorTriangle{0.73\paperwidth}{0.70\paperheight}{tGrey!30!tBg};
192       \ifx\inserttitlegraphic\@empty
193         \leftColorTriangle{0.73\paperwidth}{0.70\paperheight}{tTheme}
194       \else
195         \path[clip]\leftTriangle{0.73\paperwidth}{0.70\paperheight};
196         \node[anchor=north west, inner sep=0pt, outer sep=0pt] at (0,\the\paperheight) {\insert
197       \fi
198     \end{scope}
199     \path[fill=tBg]\rightTriangle{0.45\paperwidth}{\the\paperheight};
200     \ifx\logbig\@empty \else
201       \node[anchor=north east,inner sep=0mm] at
202       (.96*\the\paperwidth,.96*\the\paperheight) {\logbig};
203     \fi
204   \end{tikzpicture}
205 }

```

**titlesmallimage** Background for the titlepage with a small image in the top left corner.

```

206 \defbeamertemplate{background}{titlesmallimage}{
207   \begin{tikzpicture}[blend group=multiply]
208     \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
209     \leftColorTriangle{0.58\paperwidth}{0}{tGrey!30!tBg}
210     \ifx\logbig\@empty \else

```

```

211     \node[anchor=north east,inner sep=0mm] at
212     (.94*\the\paperwidth,.94*\the\paperheight) {\logbig};
213     \fi
214     \ifx\inserttitlegraphic\@empty
215         \leftColorTriangle{0.58\paperwidth}{\the\paperheight}{tTheme}
216     \else
217         \path[clip]\leftTriangle{0.58\paperwidth}{\the\paperheight};
218         \node[anchor=north west, inner sep=0pt, outer sep=0pt] at (0,\the\paperheight) {\insertti
219     \fi
220 \end{tikzpicture}
221 }

```

**bottomtrianglescolor** Background for title/section pages with two colored triangles in the bottom.

```

222 \defbeamertemplate{background}{bottomtrianglescolor}{
223 \begin{tikzpicture}[blend group=multiply]
224 \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
225 \leftColorTriangle{0.62\paperwidth}{0}{tTheme}
226 \rightColorTriangle{0.38\paperwidth}{0}{tSec}
227 \end{tikzpicture}
228 }

```

**bottomtrianglesbw** Background for title/section pages with two black and white triangles in the bottom.

```

229 \defbeamertemplate{background}{bottomtrianglesbw}{
230 \begin{tikzpicture}[blend group=multiply]
231 \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
232 \leftColorTriangle{0.62\paperwidth}{0}{tTheme}
233 \rightColorTriangle{0.38\paperwidth}{0}{tGrey!30!tBg}
234 \end{tikzpicture}
235 }

```

**bigtriangles** Background for section pages with a big triangle on the left.

```

236 \defbeamertemplate{background}{bigtriangles}{
237 \begin{tikzpicture}[blend group=multiply]
238 \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
239 \leftColorTriangle{0.80\paperwidth}{0.62\paperheight}{tTheme}
240 \rightColorTriangle{0.68\paperwidth}{0.58\paperheight}{tGrey!30!tBg}
241 \end{tikzpicture}

```

242 }

**lefttriangles** Background for section pages with small triangles on the left.

```
243 \defbeamertemplate{background}{lefttriangles}{
244   \begin{tikzpicture}[blend group=multiply]
245     \useasboundingbox (0,0) rectangle(\the\paperwidth,\the\paperheight);
246     \leftColorTriangle{0.52\paperwidth}{\the\paperheight}{tTheme}
247     \leftColorTriangle{0.775\paperwidth}{0}{tGrey!30!tBg}
248   \end{tikzpicture}
249 }
```

Before anything, the regular frame background is selected.

```
250 \setbeamertemplate{background}[\slidestyle]
```

Finally, we need to set the backgrounds properly before creating the different frames, create the special frames (title, section) and restore the regular background afterwards.

**\titleframe** Sets the titleframe.

```
251 \newcommand{\titleframe}{
252   \setbeamertemplate{title page}[\titlestyle]
253   \setbeamertemplate{background}[\titlestyle]
254   \frame[plain,noframenumbering]{\titlepage}
255   \setbeamertemplate{background}[\slidestyle]
256 }
```

**\sectionframe** Sets the titleframe.

```
257 \newcommand{\sectionframe}{
258   \setbeamertemplate{section page}[\sectionstyle]
259   \setbeamertemplate{background}[\sectionstyle]
260   \frame[plain,noframenumbering]{\sectionpage}
261   \setbeamertemplate{background}[\slidestyle]
262 }
263 \newcommand{\trigon@disablesectionpage}{
264   \AtBeginSection{
265     % intentionally empty
266   }
```

```

267 }
268 \newcommand{\trigon@enablesectionpage}{
269   \AtBeginSection{
270     \sectionframe
271   }
272 }

```

### 7.2.5 Layout

The following macros define the proper position of the various elements of the frame, so the fit nicely with the different background selected.

**titlebigimage** Place the text on the title frame with a big image on the top left side.

```

273 \defbeamertemplate{title page}{titlebigimage}
274 {
275   \vskip135pt
276   \begin{flushright}
277     \begin{minipage}[t][c]{0.5\textwidth}%
278       \centering
279       \usebeamerfont{title}\usebeamercolor[fg]{title}
280       \inserttitle\par
281     \end{minipage}
282     \ifx \insertsubtitle\@empty
283   \else
284     \vskip15pt
285     \begin{minipage}[t][c]{0.5\textwidth}%
286       \centering
287       \usebeamerfont{subtitle}\insertsubtitle\par%
288     \end{minipage}
289   \fi
290   \vskip13pt
291   \begin{minipage}[t][c]{0.5\textwidth}%
292     \centering
293     \usebeamerfont{author}\insertauthor%
294     \vskip5pt
295     \usebeamerfont{date}\insertdate%
296   \end{minipage}
297 \end{flushright}
298 \vfill
299 }

```

`titlesmallimage` Place the text on the title frame with a small image on the top left side.

```

300 \defbeamertemplate{title page}{titlesmallimage}
301 {
302   \vskip140pt%
303   \begin{beamercolorbox}[wd=\textwidth,sep=4pt]{title page header}
304     \usebeamerfont{title}\usebeamercolor[fg]{title}\inserttitle\par%
305   \end{beamercolorbox}%
306   \ifx \insertsubtitle \@empty
307 \else
308   \vskip8pt
309   \begin{beamercolorbox}[wd=\textwidth,sep=4pt]{subtitle page header}
310     \usebeamerfont{subtitle}\insertsubtitle\par%
311   \end{beamercolorbox}%
312 \fi
313 \vskip10pt
314 \begin{beamercolorbox}[wd=\textwidth,sep=4pt]{author}
315   \usebeamerfont{author}\insertauthor%
316 \end{beamercolorbox}
317 \vskip2pt%
318 \begin{beamercolorbox}[wd=\textwidth,sep=4pt]{date}
319   \usebeamerfont{date}\insertdate%
320 \end{beamercolorbox}
321 \vfill
322 }
```

`bottomtrianglescolor` Place the text on the title frame with two triangles on the bottom.

```

323 \defbeamertemplate{title page}{bottomtrianglescolor}
324 {
325   \vskip0pt
326   \begin{center}
327     \begin{minipage}[t][t]{\textwidth}
328       \centering%
329       \ifx\logbig\@empty \else
330         \logbig
331       \fi
332     \end{minipage}
333     \vskip15pt
334     \begin{minipage}[t][c]{\textwidth}%
335       \centering
```

```

336     \usebeamerfont{title}\usebeamercolor[fg]{title}
337     \inserttitle\par
338   \end{minipage}
339   \ifx \insertsubtitle\@empty
340 \else
341   \vskip15pt
342   \begin{minipage}[t][c]{\textwidth}%
343     \centering
344     \usebeamerfont{subtitle}\insertsubtitle\par%
345   \end{minipage}
346 \fi
347 \vskip20pt
348 \begin{minipage}[t][c]{0.5\textwidth}%
349   \centering
350   \usebeamerfont{author}\insertauthor\[\[0.3cm]%
351   \usebeamerfont{date}\insertdate
352 \end{minipage}
353 \end{center}
354 \vfill
355 }

```

**bottomtrianglescolor** Place the text on the section frame with two colored triangles on the bottom.

```

356 \defbeamertemplate{section page}{bottomtrianglescolor}
357 {
358   \vskip40pt
359   \begin{center}
360     \begin{minipage}[t][c]{\textwidth}%
361       \centering
362       \usebeamerfont{section title}\usebeamercolor[fg]{title}
363       \insertsectionhead\par
364     \end{minipage}
365   \end{center}
366   \vfill
367 }

```

**bottomtrianglesbw** Place the text on the section frame with two black and white triangles on the bottom.

```

368 \defbeamertemplate{section page}{bottomtrianglesbw}
369 {

```

```

370 \vskip40pt
371 \begin{center}
372   \begin{minipage}[t][c]{\textwidth}%
373     \centering
374     \usebeamerfont{section title}\usebeamercolor[fg]{title}
375     \insertsectionhead\par
376   \end{minipage}
377 \end{center}
378 \vfill
379 }

```

**bigtriangles** Place the text on the section frame with two big triangles.

```

380 \defbeamertemplate{section page}{bigtriangles}
381 {
382   \vskip200pt
383   \begin{flushright}
384     \begin{minipage}[t]{0.62\textwidth}%7
385       \usebeamerfont{section title}\usebeamercolor[fg]{title}
386       \raggedleft
387       \insertsectionhead\par
388     \end{minipage}
389   \end{flushright}
390   \vfill
391 }

```

**lefttriangles** Place the text on the section frame with two small left triangles.

```

392 \defbeamertemplate{section page}{lefttriangles}
393 {
394   \vskip25pt
395   \begin{beamercolorbox}[wd=\textwidth,leftskip=100pt,sep=4pt]{section page header}
396     \usebeamerfont{section title}\usebeamercolor[fg]{title}
397     \insertsectionhead\par
398   \end{beamercolorbox}%
399   \vfill
400 }

```

### 7.2.6 Block environments

`block` The three different block environments differ only in their colours. Rather than  
`block alerted` repeat the essentially the same template three times, we use the auxiliary macro  
`block example` `\trigon@block` to define all three templates.

```
401 \newlength{\trigon@blocksep}
402 \newlength{\trigon@blockadjust}
403 \setlength{\trigon@blocksep}{0.75ex}
404 \setlength{\trigon@blockadjust}{0.25ex}
405 \providecommand{\trigon@strut}{%
406   \vphantom{ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz}}
407 }
408 \newcommand{\trigon@block}[1]{
409   \par\vskip\medskipamount%
410   \setlength{\parskip}{0pt}
```

If a background color is defined for the block title or body, we need to add a little bit of padding to the corresponding box. Ideally, this would be accomplished by setting `colsep=0.75ex`, which is intended to add “color separation space” only when the box has a colored background. Unfortunately, `colsep` also adds this separation if the background color is inherited, even if the inherited color is actually empty. (The technical reason for this boils down to the fact that the `\ifx` directive does not expand macros.)

To achieve the correct spacing for `alertblocks` and `exampleblocks` as well as for normal blocks, we have to begin the `beamercolorbox` differently based on whether `block title` has an empty background.

If the `block title` background is empty, or the user has explicitly removed the background from (e.g.) `block title alerted`, we just need to set a `rightskip` for a nice ragged-right block title.

```
411 \ifbeamercoloreempty[bg]{block title#1}{%
412   \begin{beamercolorbox}[rightskip=0pt plus 4em]{block title#1}}{%
413   \ifbeamercoloreempty[bg]{block title}{%
414     \begin{beamercolorbox}[rightskip=0pt plus 4em]{block title#1}%
415   }%
```

Otherwise, if the `block title` has a background, we set the padding based on `\trigon@blockskip`. However, we have to visually compensate for the



`\trigon@strut` added to the block title (see below) by subtracting `\trigon@blockadjust` from the top and bottom padding.

```

416  {%
417    \begin{beamercolorbox}[
418      sep=\dimexpr\trigon@blocksep-\trigon@blockadjust\relax,
419      leftskip=\trigon@blockadjust,
420      rightskip=\dimexpr\trigon@blockadjust plus 4em\relax
421    ]{block title#1}%
422  }%

```

We can now set the contents of the `block title`. The zero-width but positive-height box `\trigon@strut` ensures that the block title box has a consistent height, even if it lacks punctuation, ascenders, or descenders.

```

423      \usebeamerfont*{block title#1}%
424      \trigon@strut%
425      \insertblocktitle%
426      \trigon@strut%
427 \end{beamercolorbox}%

```

Next, we typeset the `block body`. This the code is similar to, but simpler than, the `block title` code since we don't need to adjust for any struts.

```

428 \nointerlineskip%
429 \ifbeamercoloreempty[bg]{block body#1}{%
430   \begin{beamercolorbox}[vmode]{block body#1}{%
431     \ifbeamercoloreempty[bg]{block body}{%
432       \begin{beamercolorbox}[vmode]{block body#1}%
433     }{%
434       \begin{beamercolorbox}[sep=\trigon@blocksep, vmode]{block body#1}%
435       \vspace{-\trigon@parskip}
436     }%
437     \usebeamerfont{block body#1}%
438     \setlength{\parskip}{\trigon@parskip}%
439   }

```

This concludes the auxiliary macro `\trigon@block`. Finally, we define the block beamer templates using this macro.

```

440 \setbeamertemplate{block begin}{\trigon@block{}}
441 \setbeamertemplate{block alerted begin}{\trigon@block{ alerted}}

```

```

442 \setbeamertemplate{block example begin}{\trigon@block{ example}}
443 \setbeamertemplate{block end}{\end{beamercolorbox}\vspace*{0.2ex}}
444 \setbeamertemplate{block alerted end}{\end{beamercolorbox}\vspace*{0.2ex}}
445 \setbeamertemplate{block example end}{\end{beamercolorbox}\vspace*{0.2ex}}

```

### 7.2.7 Lists and floats

```

446 \setbeamertemplate{caption label separator}{: }
447 \setbeamertemplate{caption}[numbered]

```

### 7.2.8 Text and spacing settings

```

448 \newlength{\trigon@parskip}
449 \setlength{\trigon@parskip}{0.5em}
450 \setlength{\parskip}{\trigon@parskip}
451 \linespread{1.15}

```

### 7.2.9 Margins

The margins are defined as

```

452 \setbeamerzsize{text margin left=.05\paperwidth, text margin right=.05\paperwidth}

```

### 7.2.10 Process package options

```

453 \trigon@inner@setdefaults
454 \ProcessPgfPackageOptions{/trigon/inner}

```

## 7.3 Trigon outer theme

A **beamer** outer theme dictates the style of the frame elements traditionally set outside the “body” of each slide, such as the frame title, the logo, the footer, etc.

### 7.3.1 Package dependencies

```

455 \RequirePackage{pgfopts}

```

### 7.3.2 Definitions

We define the command `\smalllogo` to specify the logo that needs to be applied displayed on all normal frames. This command is just a replacement for `\includegraphics`, so it accepts the same options.

```

456 \def\logsmall{}

```

```

457 \newcommand*\smalllogo[2][width=20pt]{
458 \ifx{#2}\@empty\else
459 \edef\logsmall{\includegraphics[#1]{#2}}
460 \fi
461 }

```

### 7.3.3 Options

**numbering** Adds slide number to the bottom of each regular frame

```

462 \pgfkeys{
463 /trigon/outer/numbering/.cd,
464 .is choice,
465 none/.code=\setbeamertemplate{frame numbering}[none],
466 counter/.code=\setbeamertemplate{frame numbering}[counter],
467 fraction/.code=\setbeamertemplate{frame numbering}[fraction]
468 }

```

**\trigon@outer@setdefaults** Sets default values for the outer theme options.

```

469 \newcommand{\trigon@outer@setdefaults}{
470 \pgfkeys{/trigon/outer/.cd,
471 numbering=counter
472 }
473 }

```

### 7.3.4 Frame title

**frametitle** Template for the frame title

```

474 \defbeamertemplate*{frametitle}{trigon}
475 {
476 \vspace{-1pt}
477 \begin{beamercolorbox}[wd=\paperwidth,leftskip=0.05\paperwidth]{frametitle}
478 \vskip.4cm
479 \ifx\insertframesubtitle\@empty%
480 {\usebeamerfont{frametitle}\usebeamercolor[fg]{frametitle}\insertframetitle}%
481 \else%
482 {\usebeamerfont{frametitle}\usebeamercolor[fg]{frametitle}\insertframetitle}\[-.25cm]
483 {\usebeamerfont{framesubtitle}\usebeamercolor[fg]{framesubtitle}\insertframesubtitle}%
484 \fi
485 \vskip.3cm

```

```

486 \end{beamercolorbox}
487 }

```

### 7.3.5 Fame header

**headline** Templates for the frame header

```

488 \defbeamertemplate{headline}{none}{}
489 \defbeamertemplate*{headline}{logo}{
490   \ifx\logsmall\@empty\else
491     \hfill\logsmall\hspace{20pt}\vspace{-40pt}
492   \fi
493 }

```

### 7.3.6 Frame footer

Define various template for frame footer and manage frame numbering.

```

494 \setbeamertemplate{navigation symbols}{}
495
496 \defbeamertemplate{frame footer}{none}{}
497 \defbeamertemplate{frame footer}{custom}[1]{ #1 }
498 \defbeamertemplate{frame numbering}{none}{}
499 \defbeamertemplate{frame numbering}{counter}{\insertframenum}
500 \defbeamertemplate{frame numbering}{fraction}{
501   \insertframenum/\inserttotalframenum
502 }
503
504 \defbeamertemplate{footline}{plain}{%
505   \begin{beamercolorbox}[wd=\textwidth, sep=10pt]{page number in head/foot}%
506     \usebeamerfont{page number in head/foot}%
507     \usebeamercolor{fg}{page number in head/foot}%
508     \usebeamertemplate*{frame footer}
509     \hfill%
510     \usebeamertemplate*{frame numbering}
511   \end{beamercolorbox}%
512 }
513
514 \setbeamertemplate{footline}[plain]

```

**appendix** Removes page numbering and per-slide progress bars when `\appendix` is called.

This makes it easier to include additional “backup slides” at the end of the presentation, especially in conjunction with the package `appendixnumberbeamer`.

```
515 \AtBeginDocument{%
516   \apptocmd{\appendix}{%
517     \pgfkeys{%
518       /trigon/outer/.cd,
519       numbering=none}
520   }{}{}
521 }
```

### 7.3.7 Process package options

```
522 \trigon@outer@setdefaults
523 \ProcessPgfPackageOptions{/trigon/outer}
```

## 7.4 Trigon font theme

A `beamer` font theme sets the style of the font used in the document.

### 7.4.1 Package dependencies

```
524 \RequirePackage{pgfopts}
```

### 7.4.2 Title format options

`titleformat title` Controls the format of the title.

```
525 \pgfkeys{
526   /trigon/font/titleformat title/.cd,
527   .is choice,
528   regular/.code={%
529     \let\trigon@titleformat\@empty%
530     \setbeamerfont{title}{shape=\normalfont}%
531   },
532   smallcaps/.code={%
533     \let\trigon@titleformat\@empty%
534     \setbeamerfont{title}{shape=\scshape}%
535   },
536   allsmallcaps/.code={%
537     \let\trigon@titleformat\lowercase%
538     \setbeamerfont{title}{shape=\scshape}%
539     \PackageWarning{beamerthemetrigon}{%
```

```

540     Be aware that titleformat title=allsmallcaps can lead to problems%
541   }
542 },
543 allcaps/.code={%
544   \let\trigon@titleformat\uppercase%
545   \setbeamerfont{title}{shape=\normalfont}%
546   \PackageWarning{beamerthemetrigon}{%
547     Be aware that titleformat title=allcaps can lead to problems%
548   }
549 },
550 }

```

`titleformat subtitle` Controls the format of the subtitle.

```

551 \pgfkeys{
552   /trigon/font/titleformat subtitle/.cd,
553   .is choice,
554   regular/.code={%
555     \let\trigon@subtitleformat\@empty%
556     \setbeamerfont{subtitle}{shape=\normalfont}%
557   },
558   smallcaps/.code={%
559     \let\trigon@subtitleformat\@empty%
560     \setbeamerfont{subtitle}{shape=\scshape}%
561   },
562   allsmallcaps/.code={%
563     \let\trigon@subtitleformat\lowercase%
564     \setbeamerfont{subtitle}{shape=\scshape}%
565     \PackageWarning{beamerthemetrigon}{%
566       Be aware that titleformat subtitle=allsmallcaps can lead to problems%
567     }
568   },
569   allcaps/.code={%
570     \let\trigon@subtitleformat\uppercase%
571     \setbeamerfont{subtitle}{shape=\normalfont}%
572     \PackageWarning{beamerthemetrigon}{%
573       Be aware that titleformat subtitle=allcaps can lead to problems%
574     }
575   },
576 }

```

`titleformat section` Controls the format of the section title.

```
577 \pgfkeys{
578   /trigon/font/titleformat section/.cd,
579   .is choice,
580   regular/.code={%
581     \let\trigon@sectiontitleformat\@empty%
582     \setbeamerfont{section title}{shape=\normalfont}%
583   },
584   smallcaps/.code={%
585     \let\trigon@sectiontitleformat\@empty%
586     \setbeamerfont{section title}{shape=\scshape}%
587   },
588   allsmallcaps/.code={%
589     \let\trigon@sectiontitleformat\MakeLowercase%
590     \setbeamerfont{section title}{shape=\scshape}%
591     \PackageWarning{beamerthemetrigon}{%
592       Be aware that titleformat section=allsmallcaps can lead to problems%
593     }
594   },
595   allcaps/.code={%
596     \let\trigon@sectiontitleformat\MakeUppercase%
597     \setbeamerfont{section title}{shape=\normalfont}%
598     \PackageWarning{beamerthemetrigon}{%
599       Be aware that titleformat section=allcaps can lead to problems%
600     }
601   },
602 }
```

`titleformat frame` Controls the format of the frame title.

```
603 \pgfkeys{
604   /trigon/font/titleformat frame/.cd,
605   .is choice,
606   regular/.code={%
607     \let\trigon@frametitleformat\@empty%
608     \setbeamerfont{frametitle}{shape=\normalfont}%
609   },
610   smallcaps/.code={%
611     \let\trigon@frametitleformat\@empty%
612     \setbeamerfont{frametitle}{shape=\scshape}%
613   },
614 }
```

```

613 },
614 allsmallcaps/.code={%
615   \let\trigon@frametitleformat\MakeLowercase%
616   \setbeamerfont{frametitle}{shape=\scshape}%
617   \PackageWarning{beamerthemetrigon}{%
618     Be aware that titleformat frame=allsmallcaps can lead to problems%
619   }
620 },
621 allcaps/.code={%
622   \let\trigon@frametitleformat\MakeUppercase%
623   \setbeamerfont{frametitle}{shape=\normalfont}%
624   \PackageWarning{beamerthemetrigon}{%
625     Be aware that titleformat frame=allcaps can lead to problems%
626   }
627 },
628 }

```

`titleformat aliases` Allows `titleformat title` et al. to be used in the `\usetheme` declaration, where L<sup>A</sup>T<sub>E</sub>X automatically removes all spaces.

```

629 \pgfkeys{
630   /trigon/font/.cd,
631   titleformat title/.code=\pgfkeysalso{titleformat title=#1},
632   titleformat subtitle/.code=\pgfkeysalso{titleformat subtitle=#1},
633   titleformat section/.code=\pgfkeysalso{titleformat section=#1},
634   titleformat frame/.code=\pgfkeysalso{titleformat frame=#1},
635 }

```

`\trigon@font@setdefaults` Sets default values for font theme options.

```

636 \newcommand{\trigon@font@setdefaults}{
637   \pgfkeys{/trigon/font/.cd,
638     titleformat title=regular,
639     titleformat subtitle=regular,
640     titleformat section=regular,
641     titleformat frame=regular,
642   }
643 }

```

We first define hooks to change the case format of the titles.



```

644 \def\trigon@titleformat#1{#1}
645 \def\trigon@subtitleformat#1{#1}
646 \def\trigon@sectiontitleformat#1{#1}
647 \def\trigon@frametitleformat#1{#1}

```

To make the uppercase and lowercase macros work in the title, subtitle, etc., we have to patch the appropriate `beamer` commands that set their values. This solution was suggested by Enrico Gregorio in an answer to [this StackExchange question](#).

```

648 \patchcmd{\beamer@title}%
649 {\def\inserttitle{#2}}%
650 {\def\inserttitle{\trigon@titleformat{#2}}}%
651 {}%
652 {\PackageError{beamerfontthemetrigon}{Patching title failed}\@ehc}
653 \patchcmd{\beamer@subtitle}%
654 {\def\insertsubtitle{#2}}%
655 {\def\insertsubtitle{\trigon@subtitleformat{#2}}}%
656 {}%
657 {\PackageError{beamerfontthemetrigon}{Patching subtitle failed}\@ehc}
658 \patchcmd{\sectionentry}
659 {\def\insertsectionhead{#2}}
660 {\def\insertsectionhead{\trigon@sectiontitleformat{#2}}}
661 {}
662 {\PackageError{beamerfontthemetrigon}{Patching section title failed}\@ehc}
663 \@tempswafalse
664 \patchcmd{\beamer@section}
665 {\edef\insertsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{\unexpanded{#1}}}}
666 {\edef\insertsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{%
667 \noexpand\trigon@sectiontitleformat{\unexpanded{#1}}}}}
668 {\@tempswatrue}
669 {}
670 \patchcmd{\beamer@section}
671 {\def\insertsectionhead{\hyperlink{Navigation\the\c@page}{#1}}}
672 {\def\insertsectionhead{\hyperlink{Navigation\the\c@page}{%
673 \trigon@sectiontitleformat{#1}}}}
674 {\@tempswatrue}
675 {}
676 \patchcmd{\beamer@section}
677 {\protected@edef\insertsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{#1}}}

```

```

678 {\protected\edef\insertsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{%
679 \noexpand\trigon@sectiontitleformat{#1}}}}
680 {\@tempwattrue}
681 {}
682 \if@tempswa\else
683 \PackageError{beamerfontthemetrigon}{Patching section title failed}\@ehc
684 \fi
685 \@tempswafalse
686 \patchcmd{\beamer@subsection}
687 {\edef\insertsubsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{\unexpanded{#1}}}}
688 {\edef\insertsubsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{%
689 \noexpand\trigon@sectiontitleformat{\unexpanded{#1}}}}}
690 {\@tempwattrue}
691 {}
692 \patchcmd{\beamer@subsection}
693 {\def\insertsubsectionhead{\hyperlink{Navigation\the\c@page}{#1}}}
694 {\def\insertsubsectionhead{\hyperlink{Navigation\the\c@page}{%
695 \trigon@sectiontitleformat{#1}}}}
696 {\@tempwattrue}
697 {}
698 \patchcmd{\beamer@subsection}
699 {\protected\edef\insertsubsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{#1}}}
700 {\protected\edef\insertsubsectionhead{\noexpand\hyperlink{Navigation\the\c@page}{%
701 \noexpand\trigon@sectiontitleformat{#1}}}}
702 {\@tempwattrue}
703 {}
704 \if@tempswa\else
705 \PackageError{beamerfontthemetrigon}{Patching section title failed}\@ehc
706 \fi

```

Similarly, to make the `\MakeLowercase` and `\MakeUppercase` macros work in the frame title we have to patch `\beamer@@frametitle`.

```

707 \patchcmd{\beamer@@frametitle}
708 {%
709 \gdef\insertframetitle{{#2\ifnum\beamer@autobreakcount>0\relax{}\space%
710 \usebeamertemplate*{frametitle continuation}\fi}}%
711 \gdef\beamer@frametitle{#2}%
712 \gdef\beamer@shortframetitle{#1}%
713 }}

```

```

714 {{%
715     \gdef\insertframetitle{{\trigon@frametitleformat{#2}\ifnum%
716         \beamer@autobreakcount>0\relax{}\space%
717         \usebeamertemplate*{frametitle continuation}\fi}}%
718     \gdef\beamer@frametitle{#2}%
719     \gdef\beamer@shortframetitle{#1}%
720 }}
721 {}
722 {\PackageError{beamerfontthemetrigon}{Patching frame title failed}\@ehc}

```

### 7.4.3 General font definitions

```

723 \setbeamerfont{author}          {size=\normalsize}
724 \setbeamerfont{title}          {size=\LARGE,series=\bfseries}
725 \setbeamerfont{section title}{size=\LARGE,series=\mdseries}
726 \setbeamerfont{date}          {size=\small}
727 \setbeamerfont*{subtitle}      {size=\Large}
728 \setbeamerfont{frametitle}     {size=\LARGE}
729 \setbeamerfont{framesubtitle}{size=\large}
730
731 \setbeamerfont{alerted text} {size=\normalsize,series=\bfseries}
732 \setbeamerfont{block title}{size=\normalsize,series=\bfseries}
733 \setbeamerfont{block title alerted}{size=\normalsize,series=\bfseries}
734
735 \setbeamerfont{section in toc}{size=\Large}
736 \setbeamerfont{subsection in toc}{size=\large}
737 \setbeamerfont{page number in head/foot}{size=\scriptsize}
738
739 \setbeamerfont{description item}{series=\bfseries}
740 \setbeamerfont{caption}{size=\small}
741 \setbeamerfont{caption name}{series=\bfseries}

```

### 7.4.4 Process package options

```

742 \trigon@font@setdefaults
743 \ProcessPgfpPackageOptions{/trigon/font}

```

## 7.5 Trigon color theme

A `beamer` color theme sets the colors used for the different elements of the document.

### 7.5.1 Package dependencies

```
744 \RequirePackage{pgfopts}
```

### 7.5.2 Options

**colors** Provides the option to have a dark background and light foreground instead of the reverse.

```
745 \pgfkeys{
746   /trigon/color/background/.cd,
747   .is choice,
748   dark/.code=\trigon@colors@dark,
749   light/.code=\trigon@colors@light
750 }
```

**headingcolor** Select the color to use for all headings (title, section, frame, etc.).

```
751 \def\headcol{tDefaulttxt}
752 \pgfkeys{
753   /trigon/color/headingcolor/.cd,
754   .is choice,
755   default/.code=\def\headcol{tTxt},
756   theme/.code=\def\headcol{tPrim}
757 }
```

**textcolor** Select the color to use for all headings (title, section, frame, etc.).

```
758 \def\txtcol{black}
759 \pgfkeys{
760   /trigon/color/textcolor/.cd,
761   .is choice,
762   default/.code=\def\txtcol{tTxt},
763   theme/.code=\def\txtcol{tPrim!50!tTxt}
764 }
```

**block** Optionally removes the light grey background to block environments like **theorem** and **example**.

```
765 \pgfkeys{
766   /trigon/color/block/.cd,
767   .is choice,
```

```

768 transparent/.code=\trigon@block@transparent,
769 fill/.code=\trigon@block@fill
770 }
771 %
772 % \begin{macro}{\trigon@color@setdefaults}
773 % Sets default values for color theme options.
774 % \begin{macrocode}
775 \newcommand{\trigon@color@setdefaults}{
776 \pgfkeys{/trigon/color/.cd,
777 background=light,
778 block=fill,
779 headingcolor=default,
780 textcolor=default
781 }
782 }

```

### 7.5.3 Base colors

```

783 \definecolor{tGreenBlue}{HTML}{00707F}
784 \definecolor{tGreenBlueLight}{HTML}{5FA4B0}
785 \definecolor{tOrange}{HTML}{F07F3C}
786 \definecolor{tYellowOrange}{HTML}{F8AA00}
787 \definecolor{tBeigePale}{HTML}{E6E6E1}
788 \definecolor{tBeige}{HTML}{C6C0B4}
789 \definecolor{tDarkBg}{HTML}{232931}
790 \definecolor{tDarkFg}{HTML}{EEEEEE}
791 \definecolor{tLightBg}{HTML}{FFFFFF}

```

### 7.5.4 Derived elements

All the elements are set using the base colors defined here above.

```

792 \newcommand{\trigon@colors@dark}{
793 \colorlet{tPrim}{tGreenBlueLight}
794 \colorlet{tSec}{tGreenBlue}
795 \colorlet{tAccent}{tYellowOrange}
796 \colorlet{tTxt}{tDarkFg}
797 \colorlet{tBg}{tDarkBg}
798 \colorlet{tGreyBg}{tGrey!7!tBg}
799 }
800 \newcommand{\trigon@colors@light}{

```

```

801 \colorlet{tPrim}{tGreenBlue}
802 \colorlet{tSec}{tGreenBlue}
803 \colorlet{tAccent}{tOrange}
804 \colorlet{tTxt}{black}
805 \colorlet{tBg}{tLightBg}
806 \colorlet{tGreyBg}{tGrey!25!tBg}
807 }
808 \colorlet{tGrey}{tBeige}
809 \colorlet{tTheme}{tGreenBlue}
810 \setbeamercolor{background canvas}{bg=tBg}
811 \setbeamercolor{normal text}{fg=\txtcol, bg=tBg}
812 \setbeamercolor{example text}{fg=tPrim}
813 \setbeamercolor{alerted text}{fg=tAccent}
814
815 \setbeamercolor{title}{fg=\headcol, bg= , parent=normal text}
816 \setbeamercolor{titlelike}{use=title, parent=title}
817 \setbeamercolor{author}{use=normal text, bg= , parent=normal text}
818 \setbeamercolor{date}{use=normal text, bg= , parent=normal text}
819 \setbeamercolor{institute}{use=normal text, parent=normal text}
820 \setbeamercolor{structure}{use=normal text, fg=normal text.fg}
821
822 \setbeamercolor{palette primary}{use=titlelike, parent=titlelike}
823 \setbeamercolor{frametitle}{use=titlelike, parent=titlelike}

```

Block environments such as `theorem` and `example` have a grey-tinted background color by default. The option `block=transparent` removes the background color.

```

824 \newcommand{\trigon@block@transparent}{
825   \setbeamercolor{block title}{%
826     use=normal text,
827     fg=normal text.fg,
828     bg=normal text.bg!96!fg
829   }
830   \setbeamercolor{block body}{
831     use={block title, normal text},
832     bg=block title.bg!35!normal text.bg
833   }
834 }
835 \newcommand{\trigon@block@fill}{
836   \setbeamercolor{block title}{%

```

```

837     use=normal text,
838     fg=normal text.fg,
839     bg=normal text.bg!80!normal text.fg
840 }
841 \setbeamercolor{block body}{
842     use={block title, normal text},
843     bg=block title.bg!50!normal text.bg
844 }
845 }
846
847 \setbeamercolor{block title alerted}{%
848     use={block title, alerted text},
849     bg=block title.bg,
850     fg=alerted text.fg
851 }
852 \setbeamercolor{block title example}{%
853     use={block title, example text},
854     bg=block title.bg,
855     fg=example text.fg
856 }
857 \setbeamercolor{block body alerted}{use=block body, parent=block body}
858 \setbeamercolor{block body example}{use=block body, parent=block body}

```

The color of other smaller elements is defined as follows

```

859 \setbeamercolor{footnote}{fg=normal text.fg!90!normal text.bg}
860 \setbeamercolor{footnote mark}{fg=..}
861 \setbeamercolor{footline}{fg=normal text.fg!50!normal text.bg, parent=normal text}
862 \setbeamercolor{caption}{fg=normal text.fg!60!normal text.bg, parent=normal text}
863
864 \setbeamercolor{itemize item}{use=example text, parent=example text}
865 \setbeamercolor{itemize subitem}{use=itemize item, parent=itemize item}
866 \setbeamercolor{itemize subsubitem}{use=itemize item, parent=itemize item}
867 \setbeamercolor{enumerate item}{use=example text, parent=example text}
868 \setbeamercolor{enumerate subitem}{use=enumerate item, parent=enumerate item}
869 \setbeamercolor{enumerate subsubitem}{use=enumerate item, parent=enumerate item}
870 \setbeamercolor{description item}{use=example text, parent=example text}

```

### 7.5.5 Process package options

```

871 \trigon@color@setdefaults

```

872 \ProcessPgfPackageOptions{/trigon/color}