

# *beamertheme-geode* package documentation

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## Introduction

*geode* is a beamer package aiming to change the default theme to a new, modern look with a diversity of colour tones. All illustrations are derivatives from the `geode-example.tex` file provided along the package.

## 1 Installation

*geode* can be installed on L<sup>A</sup>T<sub>E</sub>X like any other package using `\usepackage{beamertheme-geode}`.

## 2 Dependencies

*geode* requires the following packages to work properly :

- Tikz
- xcolor
- helvet

## 3 Subthemes

*geode* currently offers two ways to modify the default look of beamers using the following options : resolution and colour.

### 3.1 Resolution

The resolution determine the amount of polygons of the background and surrounding elements. Three settings are available at this time :

- **default** - the default value, for a better visual effect;
- **lowpoly** - a simplified background for a more minimalistic aspect;
- **ultralowpoly** - a very simplified effect (fastest compilation time);
- **highpoly** - a more complex tessellation (may increase processing time).



default setting



highpoly setting



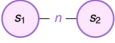

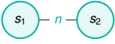

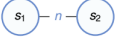
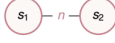
lowpoly setting



ultralowpoly setting

## 3.2 Colour palettes

The currently available colour palettes are showcased below along the name of their option.

<p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>	<p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>
<p>amethyst palette</p> <p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>	<p>obs palette</p> <p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>
<p>phos palette</p> <p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>	<p>citrine palette</p> <p>An example : Dihedral groups</p> <p><b>Definition</b> Let <math>D_n</math>, called <b>dihedral group of order <math>2n</math></b> be the group of all transformations leaving a regular <math>n</math>-gon unchanged.</p> <p><math>D_n</math> can be given a Coxeter group struture with :</p> <p>► Coxeter matrix :</p> $MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$ <p>► Coxeter graph :</p>  <p>Camille Jaret Introduction to Coxeter Groups 2 / 2</p>
<p>diamond palette</p>	<p>pquartz palette</p>

The colours of the presentation can be accessed through their names : `bg1`, `bg2`, `bg3`, `bg4` correspond to background colour in order of brightness, `accent` is the colour of titles, and `geode` is the colour of some background elements.  
Further customisation is available through the `\custompalette` macro detailed in the next section.

## 4 Macros

### 4.1 Presentation

Presentation macros are meant to make your life slightly easier when giving form to your beamer document.

- `\geotitle` - inserts a title card in your presentation;
- `\geosection` - inserts a section card in your presentation;
- `\geosubsec` - inserts a subsection card in your presentation.

### 4.2 Custom colour palette

In order to modify key colours of the presentation theme, the following macros are available :

- `\custompalette{element}{r}{g}{b}` - the `r,g,b` components will affect the hue of the desired `element` of the current palette. *Note that the rgb channels take values between 0 and 1*

The editable elements are defined as follows, distinguished in two categories :

- Overall modifiers :
  - `background` - hue of the background tessellation
  - `tone` - hue of the important texts, as well as headline and footline
- Specific modifiers :
  - `bg1, bg2, bg3, bg4` - colours for the background. (`bg1` is highlighted in yellow below).
  - `accent` - colour of the most important text
  - `geode` - colour of some background elements
  - `dots` - colour of the bullet points (set to `accent` by default, and should be changed if the latter is set to a light colour)



The skeleton for a color theme is as follows :

```
% Theme colours
\definecolor{accent}{rgb}{0,0,0}
\definecolor{geode}{rgb}{0,0,0}
\definecolor{dot}{rgb}{0,0,0}

% Background
\definecolor{bg1}{rgb}{0,0,0}
\definecolor{bg2}{rgb}{0,0,0}
\definecolor{bg3}{rgb}{0,0,0}
\definecolor{bg4}{rgb}{0,0,0}
```

By naming the file `beamercolorthemegeode-mytheme.sty`, it can be called within a beamer document using `\usecolortheme{geode-mytheme}` to more easily use the same layout over multiple documents. Additionally, the package's [Github page](#) feature a 'palette submissions' folder where custom palettes can be added, so that they can be implemented in latter versions of the package.